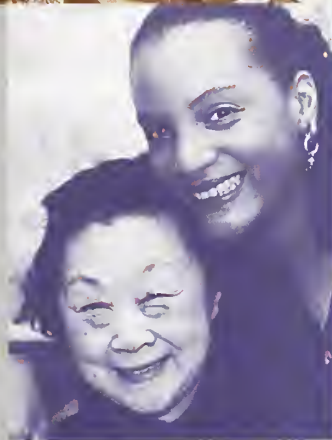


The Health Status of Asian and Pacific Islander Americans in California

Office of Minority Health
Resource Center
PO Box 91237

Washington, DC 20546-7337



Arthur Chen
Ying Ying Meng
Purvi Kunwar
Dong Suh
Ignatius Bau
Heidi Tom
Ford Kuramoto
Peter Ng
Peter Sam
Cindy Choi
Kevin Fong
Reginald Louie
Rod Lew
Ky Quoc Lai
Floyd Huen
Peggy Saika

MH97D3281

The California Endowment and
California HealthCare Foundation

April 1997

The Health Status of Asian and Pacific Islander Americans in California

**The California Endowment *and*
California HealthCare Foundation**

April 1997

The California Endowment and California HealthCare
Foundation were established by Blue Cross of California

Published by The California Endowment and California HealthCare Foundation

April 1997

Woodland Hills, California

To order publications please call 818.703.3311 x503. Publications are made available to the public at no charge, however we ask that you limit your request to one (1) copy per publication.

Contents

Preface	i
Acknowledgments	ii
1. Overview	1
A. Introduction	
B. Definition: Asian and Pacific Islander Americans (APIA)	
C. Distinct Ethnicities and Nationalities	
D. Definition	
2. Demographics	3
A. Growth and Diversity	
B. Nativity and English Proficiency	
C. Income	
D. Education	
E. Employment	
F. History	
G. Culture	
3. Major Features of APIA Health in California	7
A. Vital Statistics	
B. Reproductive Health	
C. Hospital Discharge Survey: California	
D. Reportable Disease	
E. Other Health Problems/Risk Factors	
F. Mental Health	
G. Oral Health Issues	
H. Child and Adolescent Health	
I. Women's Health	
J. Elderly (>Age 65) Issues	
K. Gay, Lesbian and Transgendered Issues	
L. Environmental Health	
M. Occupational Health	
4. Barriers in Accessing Quality Care	39
A. Utilization Trends	
B. Financial: Bipolar Distribution	
C. Language and Culture	
D. Structural and Systems Barriers	
E. Construct of Medically Underserved APIAs	

5. Enabling Dynamics	51
A. Geographic Clustering	
B. Extensive Ethnic Specific Networks	
C. Communities Strongly Influenced by Local and National Leaders	
D. Emphasis on Extended Family	
E. International Relations and Potential Impact	
F. APIA National Health Leadership Coalescence Trends	
6. S.W.O.T. Analysis and Summary	57
A. Strengths	
B. Weaknesses	
C. Threats	
D. Opportunities	
7. Future Projections for California's APIA Population	63
8. Role of APIAs in the Formation of California's Public	65
A. Policy Recommendations	
B. Service Recommendations	
C. Research Recommendations	
D. Education and Training Recommendations	
E. Leadership Recommendations	
Bibliography	73

Preface

Prior to the establishment of The California Endowment (TCE) and the California HealthCare Foundation (CHF), Blue Cross of California commissioned five papers on the health status of California's public. TCE and CHF subsequently assumed responsibility for the project and completed the production of these five papers for public dissemination.

Each of the five papers focuses on a significant ethnic/racial population in California: African Americans; Whites; Latinos; American Indians; and Asian and Pacific Islander Americans. The goal of these papers is to go beyond epidemiology in order to explain or hypothesize factors that gave rise to these data and to better understand how health impacts the content and context of people's lives. Although the authors were asked to follow a standard format, wide latitude was granted to ensure the authors' unique voices in making the statistics more meaningful. For example, some authors emphasized how past historical experiences shaped a population's health today, others focused on the impact of financial and non-financial barriers to care and some honed in on the challenges facing certain populations and made recommendations for change.

Each report is available separately, but we hope you will consider reviewing the set of papers to gain a deeper perspective on the challenges that remain to reduce the variation in health status among the different ethnic/racial populations that together make California the most diverse, fascinating, and unique state in the nation.

Dana E. McMurtry
Director, Health Policy Research

The California Endowment

Acknowledgments

The authors would like to thank Report Coordinators, Rogelio Lopez, APIAHF Program Director and Tessie Guillermo, APIAHF Executive Director.

The authors of this report are: Arthur Chen, M.D., Department of Health, Alameda County; Ying Ying Meng, Dr.P.H., Association of Asian Pacific Community Health Organizations (AAPCHO); Purvi Kunwar, M.P.H., Association of Asian Pacific Community Health Organizations (AAPCHO); Dong Suh, M.P.P., Asian & Pacific Islander American Health Forum; Ignatius Bau, J.D., Asian & Pacific Islander American Health Forum; Heidi Tom, M.A., Asian & Pacific Islander American Health Forum; Ford Kuramoto, D.S.W., National Asian Pacific American Families Against Substance Abuse (NAPAFASA); Peter Ng, M.D., San Francisco Department of Public Health; Peter Sam, M.D., Asian Health Services; Cindy Choi, Asian Pacific Islanders for Reproductive Health (APIRH); Kevin Fong, Asian Health Services; Reginald Louie, D.D.S., U.S. Public Health Service, Region IX; Rod Lew, M.P.H., Asian Health Services; Ky Quoc Lai, University of California, San Francisco, Vietnamese Community Health Promotion Project; Floyd Huen, M.D., Highland General Hospital, Department of Medicine; Peggy Saika, M.S.W., Asian Pacific Environmental Network.

Asian & Pacific Islander American Health Forum's analyses of California Mortality Data was undertaken as a part of a cooperative agreement (U50/CCU907249-01) between APIAHF and the National Center for Health Statistics/Centers for Disease Control and Prevention to advance the understanding of the health status of Asian and Pacific Islanders. The Hospital Discharge Survey data were obtained through the Center for the Study of Latino Health at the University of California, Los Angeles.

The authors also thank Dr. Howard Pollick, University of California, San Francisco, School of Dentistry and Dr. Mark H.K. Greer, Hawaii Department of Health for release of unpublished materials on oral health. Clarissa Tom from the Asian & Pacific Islander Health Forum provided analytic review of Asian/Pacific Islander American physician recruitment and training status.

1. Overview

A. Introduction

In reviewing the health status of California's Asian and Pacific Islander American (APIA) population, one is struck by its rapid growth and tremendous diversity. Major demographic, social, economic, and health indicator variation among ethnic subgroups (e.g. Chinese, Samoan, Hmong, etc.) highlight the complexities of studying APIAs. Inadequate health research, data collection and surveillance systems compromise California's ability to identify the comprehensive health profiles of all APIA ethnic subgroups. This report draws from existing data sets and the literature in identifying major APIA health trends. It presents policy, services, research, education and leadership recommendations that will promote improvements in both health surveillance and health status of California's APIA Community.

B. Definition: Asian and Pacific Islander Americans (APIA)

It is important to recognize that historically, Asian Americans and Pacific Islanders were grouped as part of a determined movement to achieve political recognition through greater numbers. Consequently their tremendous diversity extends beyond ethnicity or nationality and includes conflicting views on all grouped or aggregate labels and references. For example, Native Hawaiians and Chamorros involved with sovereignty movements take issue with "Asian" and "American" references. Even immigrants from Asian countries more readily identify themselves by nationality (e.g. Chinese American) as opposed to "Asian American." Therefore the term APIA, which will be used throughout this text, refers only to Asian and Pacific Islander groups that currently reside in California. The state's current political leadership has initiated anti-immigrant and anti-affirmative action legislation, both of which foretell negative impact on its APIA communities. The APIA term acknowledges these current political realities and the critical need for grouped identification to achieve fair representation. APIA also offers

some convenience in what otherwise would be referencing to over thirty distinct subgroups. The authors do not in any way mean to offend individual nationalities or ethnicities or indigenous groups with such referencing.

C. Distinct Ethnicities and Nationalities

California's APIAs are represented by the following distinct ethnicities and nationalities: Asians: Filipino, Chinese, Japanese, Asian Indian, Korean, Vietnamese, Cambodian, Hmong, Laotian, Mien, Thai, Bangladeshi, Burmese, Indonesian, Malaysian, Okinawan, Pakistani, Sri Lankan, Nepali, Sikkim and Iwo-Jiman. Pacific Islanders: Hawaiian, Samoan (American and Western Samoa), Chamorro (Guam), Mariana Islanders (Commonwealth of the Northern Mariana Islands), Marshallese (Republic of the Marshall Islands), Pohnpeian, Chuukese, Yapese, Kosraean (Federated States of Micronesia), Palauan (Republic of Palau), Tongan, Melanesian, Fijian.

D. Definition: Health

This paper acknowledges a broad view of health which includes the physical, mental, spiritual and social well-being of the individual and society as a whole.

2. Demographics

A. Growth and Diversity

Asian and Pacific Islanders are California's fastest growing population. They represent over thirty extremely diverse ethnic subgroups each with substantial heterogeneity. Between 1980 and 1990, California APIAs more than doubled (118%) and comprised 9.6% (2.7 million) of the total population. California embraced the largest segment (39.1%) of the total APIA population nationwide. Ethnic subgroups showed varying growth rates from 16.4% for Japanese to 6,397% (733 to 46,892) for the Hmong (Asian/Pacific Islander Data Consortium—ACCIS, 1992).

B. Nativity and English Proficiency

Two-thirds of California's total 1990 APIA population were immigrants (US Census, 1993). Foreign born among ethnic subgroups ranged from 4.3% among Hawaiians (Native Hawaiians born outside of the U.S.), to 83% among Laotians. Not surprisingly, the APIA community's English fluency was limited with 30% of households being linguistically isolated (ACCIS, 1994). This was over three times that of California's general population (8%). Of those persons five years and over, 43% of the Asian and 17% of the Pacific Islander populations "do not speak English very well," in comparison to 16% for California's general population. This figure ranges from a low of 3.9% for Hawaiians to as high as 80% for the Hmong, showing substantial variation among ethnic subgroups (US Census, 1993). The APIA population was relatively young having an overall median age of 30.5 years compared to California's 1990 median age of 31.7 years (US Census, 1993).

C. Income

APIA income levels showed a bipolar distribution causing a deceptive shift towards a higher median income (\$39,769) than the general population (\$35,798). However, per capita income was lower (\$13,733 compared to \$16,409), and APIA's living below the poverty level were overrepresented (14.1%), compared to (12.5%) for the general California population. Again, tremendous ethnic subgroup variation exists with Southeast Asian populations bearing the highest poverty rates (27% to 62.6%) while the Filipino and the Japanese were the least impoverished at 5.8% and 6.5%, respectively. Twelve percent of APIA households received Social Security income compared to 24.6% for the White population. 14% received public assistance income (Aid to Families with Dependent Children, Supplementary Security Income, General Assistance; excludes medical care assistance), compared to 7.2% for Whites (US Census, 1993).

D. Education

APIA education levels also reveal a bipolar distribution with overrepresentation among those receiving bachelor's degrees (34.1%) and those with less than fifth grade education (7.9% compared to 4.7% of the general California population). Ethnic subgroups education varied immensely with highly educated professionals and illiterate rural peasants and tribal hill people. Over 51% of Asian Indians 25 years and over have earned at least a bachelor's degree, while 59% of the Hmong, 48% of Cambodians and 45% of Laotians had less than a fifth grade education. Gender differences were also evident with 38.2% of men achieving bachelor's degrees compared to 30.5% of women. The Hmong and Cambodian women were the least educated (only 27% of those who earned at least a bachelor's degree) in comparison to their male counterparts. Fewer APIA men had less than fifth grade education (5.8%) compared to APIA women (9.8%), (US Census, 1993).

E. Employment

APIA unemployment rate was 5.6% and varied from 3% to 20% among ethnic subgroups in contrast to 6.6% for the general California population. (US Census, 1993).

F. History

Chinese immigrants arrived in California in the early 19th century, followed by Japanese and Filipinos throughout the early 20th century. Southeast Asians arrived in the U.S. originally as refugees after the Vietnam War, and have continued to immigrate to reunite with families here. The largest influx of Asian immigrants have come in the past 20 years, seeking economic opportunities, political freedom, or family reunification.

Centuries of European colonization in Hawaii and the Western Pacific were replaced by U.S. rule in the 19th century. Previously territories of the United States, the Federated States of Micronesia, Republic of Palau, and the Republic of the Marshall Islands, have become independent nations, freely associated with the United States. The remaining jurisdictions include the U.S. territories of Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, which is currently governed under covenant with the U.S. persons born in these jurisdictions are U.S. citizens.

G. Culture

Asian and Pacific Islander culture, religion and folk health beliefs contrast sharply with Western values and medical models and profoundly influence health perceptions and behaviors. APIAs practice non-Western religions, such as Buddhism, Hinduism, Islam, Shinto, Shamanism, Sikhism, Taoism and tribal religions as well as Christianity. Naturist spirituality is the basis of the belief system of many Pacific Island cultures. Chinese Taoist philosophy is the basis of most traditional Asian medical theories and incorporates the dualist balance of Yin and Yang (hot-cold) that influences all health behaviors (e.g. nutrition, activity, treatment modalities, etc.). The level of influence depends on many factors: educational level; socioeconomic status; access; level of acculturation; and family influence. Often both traditional (e.g. herbal remedies or spiritual healing) and Western systems are used together.

3. Major Features of APIA Health in California

A. Vital Statistics

Although APIA population are composed of over thirty subgroups, the data do not reflect the diversity and are often aggregated or placed in a nonspecific, other category. Therefore, it is not feasible to accurately determine the health status of specific APIA ethnic subgroups in many cases. The following presentation describes major grouped APIA trends and some ethnic-specific findings.

Leading Causes of Death

California's vital statistics offer the most detailed race/ethnicity information on APIAs. In 1993, the leading causes of death for APIAs were similar to the general California population with some minor variation in ranking. Overall, cancer, heart disease, strokes, pneumonia/influenza, unintentional injuries, COPD, suicide, diabetes, homicide and chronic liver disease comprised the top ten causes. Ranking varied greatly among different age groups (*Table 1*). For children and young adults, the leading causes of death were unintentional injuries, cancers, homicides, suicides, congenital anomalies. For adults, they were cancers, unintentional injuries, heart diseases, homicides and suicides. For the elderly, they were cancers, heart diseases, cerebrovascular diseases, pulmonary disease and pneumonia/flu. The patterns are fairly similar among the APIA subpopulations. Gender differences are notable among adults. Deaths due to homicide and suicide were prominent for all young adults, however, suicide was a higher contributing cause among women and homicide among men. AIDS deaths were also more frequent among men (APIAHF, 1993).

Table 1. Five Leading Causes of Death for APIA Population in California (1989–1991)

Age Groups	1st LCD	2nd LCD	3rd LCD	4th LCD	5th LCD	6th LCD	7th LCD	8th LCD	9th LCD	10th LCD
Under 1, female	cong ano	perinatal	SIDS	pneum/flu	heart dis	unint inj	homicide	cirr/liver	cerebrovas	cancers
Under 1, male	cong ano	perinatal	SIDS	heart dis	unint inj	pneum/flu	cancers	homicide	cerebrovas	cirr/liver
Under 1	cong ano	perinatal	SIDS	heart dis	pneum/flu	unint inj	homicide	cancers	cerebrovas	cirr/liver
1–4 yrs, female	unint inj	cong ano	cancers	homicide	pneum/flu	heart dis	cerebrovas	pulmonary	SIDS	perinatal
1–4 yrs, male	unint inj	heart dis	cong ano	cancers	pneum/flu	homicide	cerebrovas	pulmonary	SIDS	perinatal
1–4 yrs	unint inj	cong ano	heart dis	cancers	pneum/flu	homicide	cerebrovas	pulmonary	SIDS	perinatal
5–14 yrs, female	unint inj	cancers	cong ano	homicide	heart dis	pulmonary	suicide	perinatal	pneum/flu	cerebrovas
5–14 yrs, male	unint inj	cancers	homicide	cong ano	heart dis	pulmonary	pneum/flu	suicide	perinatal	cerebrovas
5–14 yrs	unint inj	cancers	homicide	cong ano	heart dis	pulmonary	suicide	pneum/flu	perinatal	cerebrovas
15–24 yrs, fem	unint inj	suicide	homicide	cancers	heart dis	cong ano	cerebrovas	pneum/flu	diabetes	pulmonary
15–24 yrs, male	unint inj	homicide	suicide	cancers	heart dis	cong ano	pneum/flu	diabetes	pulmonary	cerebrovas
15–24 yrs	unint inj	homicide	suicide	cancers	heart dis	cong ano	cerebrovas	pneum/flu	diabetes	pulmonary
25–34 yrs, fem	cancers	unint inj	suicide	homicide	heart dis	pneum/flu	cong ano	AIDS	cerebrovas	pulmonary
25–34 yrs, male	unint inj	suicide	homicide	cancers	AIDS	heart dis	cerebrovas	diabetes	cirr/liver	pulmonary
25–34 yrs	unint inj	cancers	suicide	homicide	heart dis	AIDS	pneum/flu	cerebrovas	cong ano	diabetes
35–44 yrs, fem	cancers	unint inj	heart dis	suicide	homicide	cerebrovas	AIDS	diabetes	pneum/flu	pulmonary
35–44 yrs, male	cancers	heart dis	unint inj	AIDS	homicide	suicide	cirr/liver	cerebrovas	pulmonary	pneum/flu
35–44 yrs	cancers	heart dis	unint inj	homicide	AIDS	suicide	cerebrovas	cirr/liver	pulmonary	pneum/flu
45–54 yrs, fem	cancers	heart dis	cerebrovas	unint inj	suicide	diabetes	homicide	cirr/liver	pneum/flu	pulmonary
45–54 yrs, male	cancers	heart dis	cerebrovas	unint inj	AIDS	cirr/liver	suicide	homicide	pulmonary	pneum/flu
45–54 yrs	cancers	heart dis	cerebrovas	unint inj	suicide	cirr/liver	homicide	AIDS	diabetes	pulmonary

(Cont.) Five Leading Causes of Death for APIA Population in California (1989–1991)

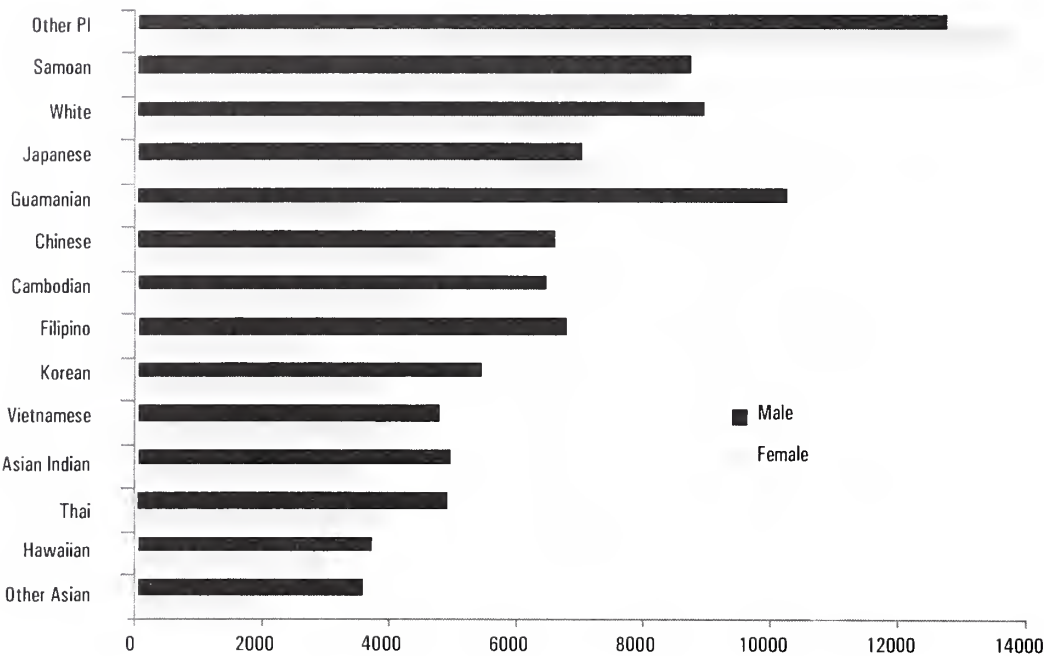
55–64 yrs, fem	cancers	heart dis	cerebrovas	unint inj	pulmonary	diabetes	cirr/liver	pneum/flu	suicide	homicide
55–64 yrs, male	cancers	heart dis	cerebrovas	pulmonary	unint inj	cirr/liver	pneum/flu	suicide	diabetes	homicide
55–64 yrs	cancers	heart dis	cerebrovas	unint inj	pulmonary	diabetes	cirr/liver	pneum/flu	suicide	homicide
65–74 yrs, fem	cancers	heart dis	cerebrovas	diabetes	pulmonary	unint inj	pneum/flu	cirr/liver	suicide	AIDS
65–74 yrs, male	cancers	heart dis	cerebrovas	pulmonary	pneum/flu	unint inj	diabetes	cirr/liver	suicide	AIDS
65–74 yrs	cancers	heart dis	cerebrovas	pulmonary	diabetes	pneum/flu	unint inj	cirr/liver	suicide	AIDS
75+ yrs, female	heart dis	cancers	cerebrovas	pneum/flu	diabetes	pulmonary	unint inj	cirr/liver	suicide	homicide
75+ yrs, male	heart dis	cancers	cerebrovas	pneum/flu	pulmonary	unint inj	diabetes	cirr/liver	suicide	cong ano
75+ yrs	heart dis	cancers	cerebrovas	pneum/flu	pulmonary	diabetes	unint inj	cirr/liver	suicide	homicide
all ages, female	heart dis	cancers	cerebrovas	pneum/flu	unint inj	diabetes	pulmonary	suicide	homicide	cong ano
all ages, male	heart dis	cancers	cerebrovas	unint inj	pneum/flu	pulmonary	homicide	suicide	diabetes	cirr/liver
all ages	heart dis	cancers	cerebrovas	unint inj	pneum/flu	pulmonary	diabetes	suicide	homicide	cong ano

Age-adjusted Death Rates Due to All Causes, 1990

Overall APIAs had 305.8 deaths/100,000 population compared to 511.3/100,000 among Whites. Low age-adjusted death rates require further investigation due to the known tendency for elderly immigrants to return to their home country during their waning years. Ethnic subgroups varied drastically from a low of 253/100,000 (Thai) to a high of 1,088.7/100,000 (Samoan). Substantial ethnic variation exists within specific age groups (*Chart 1*). For example, death rates among those age 75 and over ranged from approximately 3,254.4/100,000 (Hawaiians) up to 13,238.8/100,000 (other Pacific Islanders) (APIAHF, 1993).

Chart 1.

Death Rates for 75 Years Old and Over: California (1989–1991)



Source: APIHF, 1993

Excess Age-adjusted Death Rates Due to Specific Diagnoses, 1992

“Asian/Other” populations had higher death rates compared to White counterparts for the following diagnostic groupings:

	API/Other	White
Homicide	7.2/100,000 5.9/100,000	
Maternal	8.1	6.6
Post-neonatal	2.9	2.7
Stroke	26.1	25.3

Cardiovascular Disease

Cardiovascular diseases are a major cause of morbidity and mortality in the APIA community. Data for coronary heart disease among APIA women in California are not available. However, data from the California Department of Health Services (Dumbault, et al., 1994) showed that death rates due to coronary heart disease in 1990 varied by a broad range (103.5 among Asian Indians to 21.6 for other APIA per 100,000). Except for Hawaiians, (93.5 per 100,000), all of the Pacific Islander subgroups had higher rates than any of the other 21 specific race and ethnic groups: Samoans (193.7); Chamorros (243.8); and, other Pacific Islanders (275.7). A 1988 study conducted on Asian Pacific Islanders in California found that Filipino women over the age of 50 had a higher rate of hypertension (65%) than both African American women (63%) and the general population of women (47%) over the age of 50 (APIAHF, 1990). Much research remains to be done on the relationship between gender, ethnicity, immigration history, adaptations in diet, stress and biological processes such as hypertension, cardiovascular disease, and stroke (Janes, 1990).

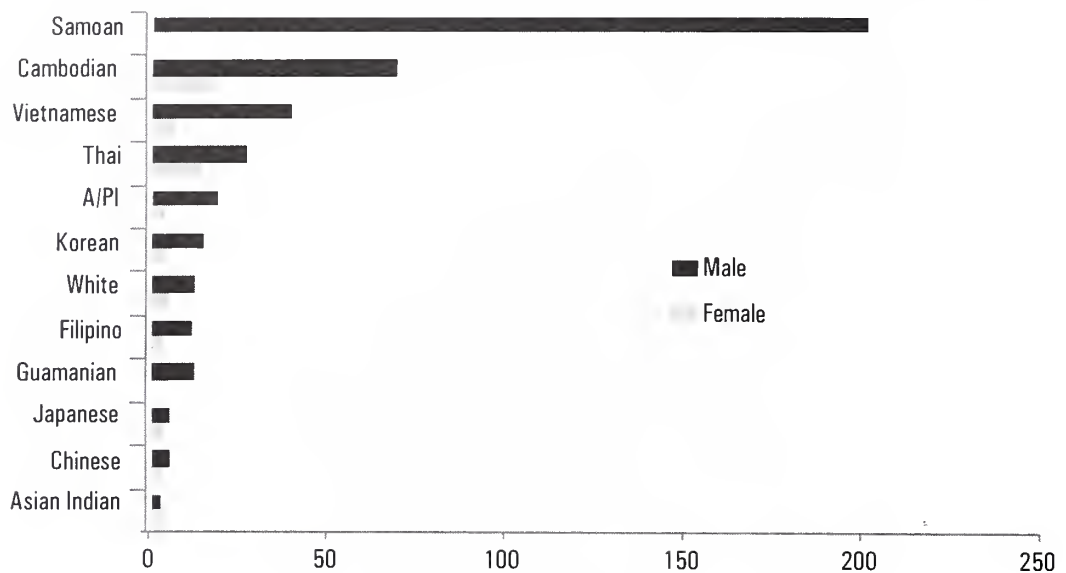
Homicide Deaths Among Young Adults Age 15–24

Violence, especially among young adults, has been a rising concern for the nation.

Among this age group, homicide is the second leading cause of death for APIA males in California and accounts for more than one in five deaths. One in ten deaths among similar aged APIA females are due to homicide.

Chart 2.

Death Rates Due to Homicide for 15–24 Years Old: California 1989–1991*



*A/PI denotes the aggregate APIA population.

Source: APIHF, 1993

Maternal and Child Health

Of the total APIA female population in the U.S., proportionately more (51%) women are of reproductive age (15–44) (Lin-Fu, 1993). California data showed that a higher percentage of births by Laotian and Cambodian women were not attended by a physician, midwife, or nurse assistant during delivery (Mayeno and Hirota, 1994). A Centers for Disease Control and Prevention (CDC) study concluded that by most measures of risk factors in pregnancy and birth outcomes, Asian and Pacific Islander groups are as different from each other as they are from other racial and ethnic groups (Martin, 1995). Specifically, among APIA births, Korean babies were at the least risk of pre-term birth (6.0%), while Samoan babies were at more than twice the risk (12.7%) (Martin, 1995).

Low Birth Weight Infants

Low birth weight has been associated with poorer birth outcomes, and is also an indicator of access problems to and/or need for prenatal services. Babies of Asian ethnicity born in the U.S. have a higher incidence of low birth weight than the general population (AAPCHO, 1994). While Samoans and other Pacific Islander populations do not have a high incidence of low birth weight, they do have a higher rate of premature births and infant mortality (Hawaii Department of Health, 1992). Data from the “Analysis of Health Indicators for California’s Minority Populations” study done by the California Department of Health Services revealed that the greatest variation in low birth weights among ethnicities was seen within the APIA population: from a high of 8.4% of low birth weight Asian Indian infants to a low of 3.9% for Korean infants (Dumbault, 1994). The same report revealed among Pacific Islanders, the percent of low birth weight infants varied from a high of 8.0% for Chamorros to a low of 4.8% for Samoans. The *Healthy People 2000* objective is to reduce the percent age of low birth weight infants to no more than 5.0% for all births and to no more than 9.0% for Blacks. The following California APIA subgroups have not met the objective: Japanese, Vietnamese, Cambodian, Thai, Laotian, Filipino, Asian Indian, Other Asian, Hawaiian, Chamorro, and Other Pacific Islanders.

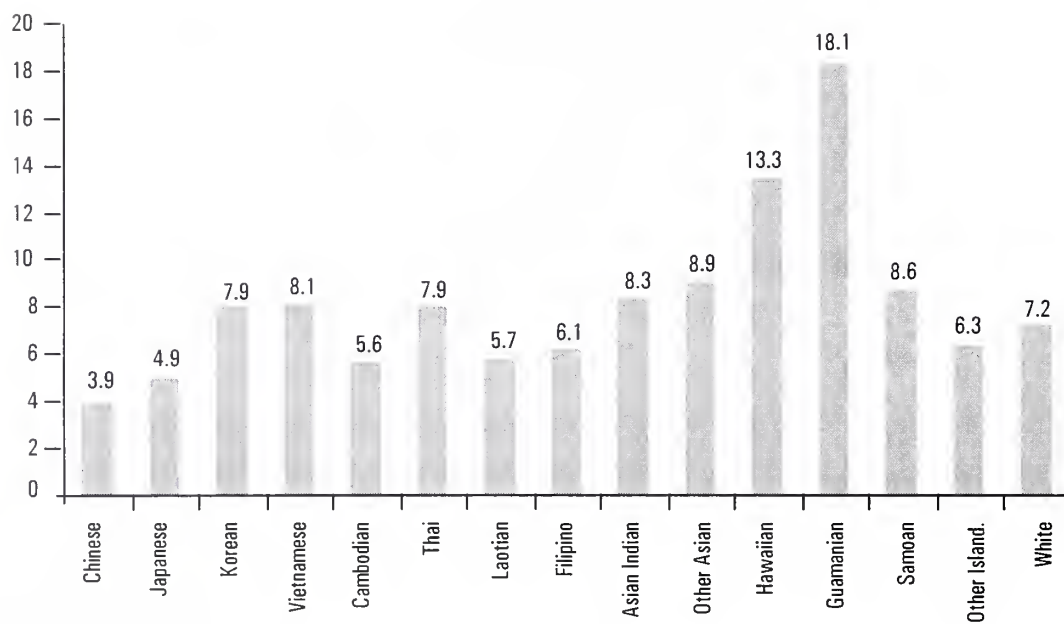
Infant Mortality Rates, 1990

The overall APIA 1990 IMR was 6.3/1,000 live births compared to 7.2/1,000 for Whites (*Chart 3*). These rates demonstrate a high divergence among ethnic subgroups ranging from 3.9/1,000 among Chinese to 18.1/1,000 among Chamorros. However, due to the small population size, the rates for Thai, Hawaiian, Chamorro, Samoan indicate trends, but are not considered reliable (California DHS, 1994).

The *Healthy People 2000* objective for infant mortality is 7.0/1000. APIAs when grouped have achieved this. However, several ethnic subgroups including Korean, Vietnamese, Thai, Laotian, Asian Indian, other Asian, Hawaiian, Chamorro and Samoans have yet to achieve this objective.

Chart 3.

Infant Death Rates: California 1990



Source: Dumbauld S, et al., Minority Health Information Project, February 1994.

B. Reproductive Health

There is limited data on knowledge and utilization of family planning methods among California APIA women. As stated above, more than half of the total APIA population is of reproductive age (15–44). APIA women, while the most likely among women of color to have health insurance, are the least likely to have an annual gynecological exam, and the least likely to ever have had a Pap smear or a mammogram (Communications Consortium, 1992). In a 1992 sociocultural study of Chinese women, birth control information and breast and pelvic examinations are only deemed appropriate in the context of marriage and childbearing. Chinese women are likely to be reluctant to share reproductive health problems with male medical providers (Ho, 1992).

Early Prenatal Care

Lack of prenatal care is another factor which has been associated with poor birth outcomes. Early entry into prenatal care permits early identification of risks and appropriate interventions, and this measure also serves as an indicator of barriers to accessing care. Early prenatal care is defined as care beginning in the first trimester of pregnancy (Dumbault, 1994). Statistics from this report reveal that the highest and lowest percentages of women receiving early care are within the APIA subgroups. Among Asian Americans, Japanese women were most likely to seek prenatal care in the first trimester (89.6%), while Laotian women were least likely to seek early care (56.1%) resulting in Laotian babies at more than twice the risk of pre-term births (Dumbault, 1994). The Pacific Islander population had the lowest percentages of women receiving early prenatal care, varying from a high of 68.5% for Hawaiian women to a low of 45.7% for Samoan women (Dumbault, 1994). In a Los Angeles County study, Filipino women were less likely to receive prenatal care than Koreans, despite the fact that Koreans faced a higher degree of language, cultural and financial barriers (APIAHF, 1993).

The *Healthy People 2000* objective is to have 90% of all women receiving early prenatal care. In California, Japanese women are close to achieving that objective, at 89.6%, followed by Chinese women at 87.9% and Korean women at 84.0%. However, other Asian groups such as Laotian women have only 56.1% receiving early prenatal care and among Pacific Islander, Samoans had the lowest at 45.7%. All of the Pacific Islanders

groups had fewer women receiving early prenatal care than white women (83.3%) (Dumbault, 1994).

Teenage Pregnancy

Both the highest and lowest percentages of teen births were found within the Asian population: Laotian teens had the highest percentage (8.7%) while Chinese teens had the lowest percentage (0.3%). The percentage of teen births for Pacific Islanders varied from a high of 4.7% for Chamorro teens to a low of 1.5% for Other Pacific Islander teens (Dumbault, 1994).

While Asians and Pacific Islanders had fewer teenage births (4.3%) of all births compared to all other groups of women, it is important to note the significant difference between the specific ethnic groups and that these figures are solely based on live births statistics in California and not actual teenage pregnancy rates. For example, according to a San Francisco-based study, Filipino female youth (18 years and under) have the highest pregnancy rates among Asians at 6.7%, compared to White female youth at 8.5%. (SFDPH Perinatal Program, 1993).

C. Hospital Discharge Survey: California 1990

Hospital discharge survey contains extensive utilization and morbidity data. However, the figures compiled are crude and without age-adjustment and proper weighting. Furthermore, APIA data are collected as either one group or as “A/PI & Other” thus limiting disaggregation and analysis of specific ethnic subgroups. The following brief review reveals some preliminary trends based on APIA proportional comparisons.

Leading Diagnoses

The predominant diagnosis-related groups (DRG) for all California hospitalizations in 1992 were birth-related. Vaginal delivery without complication, normal newborns, neonate with other significant problems, cesarean section, and psychoses were the top 5 DRGs for the APIA population. APIAs had higher proportions of admissions for full-term neonates with major problems, vaginal delivery with complicating diagnosis, cesarean section with complications and vaginal delivery with sterilization and/or D&C. This pattern may reflect a relatively younger APIA population, which yielded 24.4% of

those discharged under one year of age compared to 11.9% for Whites. Other top 20 diagnoses included CVAs, heart failure and shock, GI hemorrhage, simple pneumonia, angina pectoris, chemotherapy, bronchitis/asthma, COPD, and respiratory inflammation (CA DHS, 1993).

Top 20 DRGs for APIA

Diagnosis	# of Discharges/100,000 population
Vaginal delivery w/o complicating diagnosis	1217
Normal Newborn	1161
Neonate w/ other significant problems	365
Cesarean section w/o CC	260
Psychoses	149
Full term neonate w/major problems	130
Spec. cerebrovascular disorders except TIA	127
Heart Failure + shock	117
Vaginal delivery w/complicating diagnosis	110
G.I. hemorrhage w/CC	103
Simple pneumonia + pleurisy, >17 w/CC	97
Uterine + afnexa proc for non-malig w/o CC	92
Cesarean section w/CC	82
Angina pectoris	81
Chemotherapy	80
Bronchitis/asthma, 0-17	75
Chronic obstructive pulmonary disease	67
Respiratory infect + inflamm, >17 w/CC	66
Percutaneous cardiovas procs	61
Vaginal delivery w/sterilization +/- D&C	59

Source: California Hospital Discharge Survey

Hospital Utilization, 1993

API & Other populations tended to spend fewer days hospitalized at 428.1/1,000 persons per year compared to 614/1,000 for the general California population. Similar lower rates occurred for API & Other elderly age 65 and older (2,010.5/1,000 vs. 2,440.4/1,000) and children up to age 14 (315.9/1,000 vs. 348.2/1,000). Corresponding average length of stay for routine API & Other discharges (3.58 days) were also less than for White counterparts (4.41).

Hospital Charges, 1993

Lower utilization also leads to lower per capita hospital charges of \$954 for API & Other populations compared to \$1,295 for the general California population. However, age differences influenced per capita costs. API & Other populations 65 and older had lower per capita costs of \$4,579 vs \$4,961, whereas children up to age 14 had higher costs of \$814 vs. \$669 for similar aged children in the general California population. Corresponding average charges for routine discharges among all APIAs were \$2224/day slightly lower than the \$2249 for White counterparts. APIAs admitted from the emergency room tended to stay longer (ALOS 5.69 days) and had higher charges (\$2626 per day) than Whites (ALOS 5.51 days; \$2597 per day). This may be related to less APIA access to and/or utilizations of primary care. Consequent delays in receiving acute care may lead to increasing severity of illness upon presentation at an emergency room.

Hospitalization Payer Source

Forty-three percent of 1993 California APIA hospitalizations were covered by private insurance including HMOs and prepaid health plans. This proportion was similar for Whites (44%). However, fewer APIAs were covered by Medicare (15% vs. 35% for Whites) while more APIAs were covered by Medi-Cal (33% vs. 13% for Whites). Differences in Medicare coverage may reflect both a younger APIA population and eligibility restrictions for newly arrived elderly immigrants. Increased Medi-Cal coverage is associated with higher poverty levels and extended coverage for prenatal patients and newborns. With the exception of Medi-Cal, the API & Other population averaged substantially less per capita annual expenditures for insurance covered hospitalizations.

Payer Source Average Annual Per Capita Charge, California 1993

	API & Other	White, Non Hispanic
Private Insurance	\$113	\$208
HMO/PHP	\$150	\$271
Medicare	\$247	\$714
Medi-Cal	\$322	\$174

Source: 1993 California Hospital Discharge Summary, Machine Readable File

D. Reportable Diseases

The following describes disease entities with either higher incidence or specific significance among California APIAs.

Tuberculosis, 1992

In 1992, APIAs had the highest incidence of tuberculosis (TB) with 52.3 new cases reported per 100,000 population compared to 5.0/100,000 for Whites, 14.9/100,000 for California's general population and 9.4/100,000 nationally (CADHS, 1995). There was a 46.8% increase in reported cases among APIs & Other between 1985–1994 in contrast to 3.0% growth among Whites. Most TB cases occurred among the foreign-born immigrants from countries where TB is highly endemic. Over half of cases occur within the first two years after arrival to the United States (MMWR, 1987). Filipinos (81.2%), Vietnamese (71.6%) and Chinese (33.6%) immigrant populations showed the highest growth rates among California APIAs (CADHS, 1995). The national *Healthy People 2000* objective is for a TB case rate of $\leq 3.5/100,000$. Clearly, we are very far away from achieving this objective.

Cancer

In California, cancer is the second leading cause of death, accounting for 23.0% of all deaths in 1993. Although overall APIA cancer incidence tends to be lower than the general California population, incidence for different cancers varies greatly among APIA subgroups. For example APIA ethnic groups have higher incidence ratios when compared to Whites for lung cancer among Laotians (2.3), liver cancer for Cambodian males (25.0), stomach cancer for Koreans (7.6) and cervical cancer for Cambodian (3.7) and Korean (2.6) (Jenkins & Kagawa-Singer, 1994).

For men, average annual age-adjusted cancer incidence rates between 1988–1992 were compiled for Japanese, Southeast Asians, Filipinos, Koreans, and Asian Indians. Lung, liver, prostate, stomach, and colorectal cancer were the most common types among APIA men. Japanese men (58.4 per 100,000) had a higher colorectal cancer incidence than Whites (54.9 per 100,000). Lung cancer incidence was highest among Southeast Asians (70.2 per 100,000), Filipinos (59.9 per 100,000), and Koreans (54.9 per 100,000). Prostate cancer incidence was highest among Asian Indians

(94.5 per 100,000), Japanese (74.5 per 100,000), and Filipinos (73.7 per 100,000). Stomach cancer incidence among Japanese men was 2.7 times the rate of Whites in San Francisco (33.8 vs. 12.4 per 100,000). Chinese men in San Francisco contracted liver cancer 8.6 times more than whites (30.2 vs. 3.5 per 100,000). Nasopharyngeal carcinoma was more common among Chinese men.

For women, average annual age-adjusted incidence rates between 1988–1992 were compiled for Chinese, Filipino, Japanese, Asian Indian, Korean, and Southeast Asians in California. Breast, lung, cervix, and colorectal cancer were the most common types among women from these groups as well as among Whites. With the exception of Laotian women, breast cancer was the number one cancer among women of all race/ethnic groups. Breast cancer incidence was highest among Japanese (74.0 per 100,000), Filipinos (73.8 per 100,000), Asian Indians (59.8 per 100,000), and Chinese (52.1 per 100,000) and all lower than 107 per 100,000 for all California women. The annual breast cancer mortality rate was also lower for Asian women (12.8 per 100,000) than California women (26.7 per 100,000)[Cancer Incidence, 1993]. Among many of the groups recently immigrating to California, cervical cancer was a major problem. Cervical cancer incidence rates were higher among APIA women than among White women (11.7 vs. 7.5 per 100,000). Cervical cancer incidence was highest among Southeast Asians (35.2 per 100,000), Koreans (14.7 per 100,000), and Filipinos (11.8 per 100,000). Colorectal cancer incidence was higher among Japanese women than among White women (40.3 vs. 38.4 per 100,000).

Data also indicate Pap smears and mammograms are not commonly accessed by certain APIA subgroups. According to one survey, 54% of Vietnamese women and 45% of Chinese women age 18 and over have never had a Pap smear. The same study also showed that 34% of Vietnamese women and 75% of Chinese women over 40 have never had a mammogram (Jenkins & Kawaga-Singer, 1994).

HIV/AIDS

The 1990 California APIA incidence for AIDS was 5.5 cases per 100,000 compared to 27.2 for the general population. 1992 APIA AIDS deaths occurred at 3.2 cases per 100,000 compared to 39.8 per 100,000 for Whites. According to the California HIV Prevention Plan, Asian/Pacific Islander AIDS cases had the highest percentage increase among all racial groups in San Francisco, with a total one-year increase of 30% (Harder & Kibbe, 1994). The percent increase in annual incidence of AIDS in California was highest among APIAs in the “Men having sex with men” (71.4%) and “heterosexual women” (115%) categories (based on a 3-year annual average 1990–1993). In 1990 the annual rate of increase in AIDS cases overall was higher for women than for men (Gock, 1994). The most common form of transmission among APIA women is through heterosexual contact. APIA men who have sex with other men remain the highest transmission factor for reported AIDS cases among adult APIAs—85% of the 511 reported adult APIA AIDS cases in Los Angeles and 80% of the 522 reported cases in San Francisco (SFDPH, 1995 & LADHS, 1995). Filipino, Chinese, and Japanese represent 37%, 27% and 14% of these cases in San Francisco and 31%, 9% and 13% of these cases in Los Angeles. San Francisco, Los Angeles and Alameda counties are the only localities in California which collect AIDS surveillance data by APIA national origin.

The San Francisco HIV Prevention Planning Council estimated 1993 HIV seroprevalence rates of 35% for non injection-drug user APIA men who have sex with men and 28% for non-injection drug user APIA men who have sex with men and women (SFHPPC, 1994). This estimate indicates that while the current number of reported AIDS cases among API gay and bisexual men are relatively low, the high seroprevalence rate means that the number will rise dramatically in the near future, with an accompanying need for health services. In a 1991 study, researchers found sexually active young Asian (and Pacific Islander) women had a greater number of partners in the last six months and greater frequency of sex than their male peers, meaning that young APIA women (college age) may be at elevated risk for HIV and other STDs (Cochran, et al., 1991). While not delineated by gender, another study examining San Francisco high school student’s knowledge of HIV/AIDS found Asian students to have less general knowledge about AIDS than other students (Horan, et al., 1993).

E. Other Health Problems/Risk Factors

Tobacco Use

Cigarette smoking is the major preventable cause of death in the U.S. and in California. Previous local studies showed California APIA ethnic groups had among the highest smoking prevalence among males: 65% for Cambodian, 35% for Vietnamese and 28% for Chinese. A statewide study also found that 23.5% of APIA males and 8.9% of APIA females smoked compared to 25.5% of California males and 19.2% of California females (Burns & Pierce, 1991; CDC, 1991; CDC, 1992). However, this study was only conducted in English and therefore may not accurately represent the smoking prevalence among more recently immigrated, limited English-proficient APIAs. APIAs face an increasing targeting of their communities by the tobacco industry. Two studies in California have shown that APIA neighborhoods had higher tobacco ad billboard density and greater environmental support for tobacco when compared to other ethnic neighborhoods (Bader, et al., 1993; Wildey, et al., 1992).

Hypertension

Surveillance systems for hypertension among California's APIAs are grossly inadequate. The statewide Behavioral Risk Factor Survey (BRFS) lumps APIAs into one group and is not conducted in any APIA languages. Therefore ethnic subgroup prevalence figures, especially for Pacific Islanders, cannot be determined and current figures do not capture limited English proficient APIAs. The 1992–1994 aggregated data showed 13% of APIAs at risk for hypertension. Past studies revealed significant variation in hypertension prevalence among different ethnic subgroups. In 1978 California APIA adults had a prevalence of hypertension of 18.3% compared to 19.8% for all California adults (Stavig, et al., 1978). Filipinos had the highest prevalence of hypertension (24.5%), followed by Chinese (15.7%) and Japanese (12.5%). More recent studies have shown a higher or equal hypertension prevalence among APIA immigrant males including Chinese in Oakland Chinatown (32%) [CDC, 1992], Southeast Asians in San Diego (26%) [Bates, et al., 1989], and Vietnamese in California (15%) [CDC, 1991], compared to California males (15%) in 1990. Generally, APIA males have been shown to have higher prevalence of elevated blood pressure than APIA females. Data from a survey of

4,577 adolescents (1985–1989) found elevations of systolic blood pressure (SBP) and diastolic blood pressure (DBP) to be 13.1 % and 14% respectively, in Asian girls respectively (Hohn, et al., 1994). A similar trend was noted in Asian boys. The overall prevalence of elevated SBP and DBP was 8.1% and 9.3% (Hohn, et al., 1994).

Nutrition

Data on nutritional status and practices of APIAs is extremely limited. The BRFs of Vietnamese in California revealed that respondents reported frequent consumption of high fat and high cholesterol foods and a mean consumption of fruits and vegetables (3.1 servings daily) well below the recommended five servings daily (Hung, et al., 1995). Knowledge about the association between poor nutrition and health risks was low among some APIA groups. For example, 59.1% of Chinese did not know about the association between high sodium intake and hypertension (CDC, 1992). Nutrition education needs to be incorporated into community health care settings to improve the dietary intake patterns of immigrant APIs. Trichinosis and bacterial gastroenteritis (salmonella and campylobacter) is common among Asian children due to consumption of raw or under-cooked chicken or pork in traditional food preparations (CM, 1995). Data also reveal calcium intake might be limited among Asian adolescents and young adults. Asians tend to have an incidence of osteoporosis between blacks (lowest) and whites (highest) (Melton, 1993). Peak bone mass among Chinese is about 20% lower than among Whites and rapid bone loss affects 40% of postmenopausal Chinese women (Punn, et al., 1992). Therefore building an optimal bone mass during adolescent and young adulthood is of critical importance in the prevention of osteoporosis.

Hypercholesterolemia

Hypercholesterolemia, defined as serum cholesterol more than or equal to 240 mg/dl, is another important risk factor for preventing heart disease. Unfortunately, prevalence data are extremely limited with no information on the majority of APIA ethnic subgroups. Hypercholesterolemia rates were high for Vietnamese (38% for males, 32% for females) and Chinese (41% for males, 38% for females) compared to California adults in 1990 (16% for males, 18% for females). Among registered Kaiser patients in California, hypercholesterolemia was high among Filipino males (29.8%), Japanese males (36.6%) and Japanese females (30.3%) (Klatsky, et al., 1991). Since total mean cholesterol levels

(16% for males, 18% for females). Among registered Kaiser patients in California, hypercholesterolemia was high among Filipino males (29.8%), Japanese males (36.6%) and Japanese females (30.3%) (Klatsky, et al., 1991). Since total mean cholesterol levels were lower in Asian countries than in Western countries, hypercholesterolemia is thought to be related to a more Westernized diet. However, Klatsky and Armstrong did not find a difference between U.S.-born and foreign-born Asians. It should be noted that their study involved only insured patients belonging to a prepaid medical plan.

Diabetes

California surveillance systems do not identify diabetes incidence among all APIA subgroups. What little information that exists comes from two California studies. Certain APIA ethnic groups are at increased risk for obesity and non-insulin-dependent diabetes mellitus (NIDDM), especially when adapting to a Western lifestyle. A cross-sectional study of Samoans showed that body mass index rates were highest among Samoans living in California (35%) compared to those living in Hawaii (31%), and Western Samoa (26%) [Pawson, 1986]. Prevalence of NIDDM for San Francisco Samoans was 18.0% for males and 9.0% for females age 20+ (Pawson, 1981) compared to 5.5% for white males and 7.3% for white females age 20–74 (Harris, et al., 1987). Japanese living in Hawaii and Los Angeles had a 13% rate of NIDDM compared to 6.5% for Japanese living in Hiroshima, Japan, perhaps an indication of the negative impact of a Western lifestyle. Priorities identified for health education in reducing obesity and NIDDM among APIAs include a focus on early detection of hyperglycemia, control of body weight, proper diet, and adequate physical activity (Crews, 1994).

Burns

Data from the San Francisco Department of Health's Health Center also revealed that hot water burns are a common occurrence among Asian children due to the consumption of hot soups and tea. The overwhelming majority of the burns were hot water scalds mainly to the head and chest.

Genetic Disorders

Three of the most common APIA genetic disorders include thalassemia, G6PD deficiency and lactose intolerance. Thalassemia is the major genetic disorder in APIAs

thalassemia trait may cause a mild anemia. However, alpha-thalassemia homozygous (hydrops fetalis) usually leads to stillbirth or neonatal death and may cause maternal complications such as preeclampsia and placental retention. Homozygous beta-thalassemia (Cooley's anemia) and beta/Hemoglobin E can present a clinical condition similar to sickle cell anemia which may require regular blood transfusions. Early prenatal identification of at-risk couples is urgent. Bilingual genetic counseling and the discussion of diagnostic procedures such as amniocentesis as well as possible termination of pregnancy are necessary. It also requires sensitivity to overcome traditional beliefs that pregnancies are natural and not to be interfered with. Models for disseminating screening protocols and developing effective bilingual and culturally sensitive genetic counseling programs and materials exist and need to be disseminated.

Glucose-6-phosphate dehydrogenase (G6PD) deficiency can cause hemolytic anemia after ingesting oxidant drugs (primaquine, sulfonamide, naphthalene moth balls) or fava beans, which are a common Asian food. It is an important cause of newborn hyperbilirubinemia and kernicterus. Prevalence has been established in Southern Chinese (5%) and Southeast Asians (15%) (Panich, 1982). Provider awareness and multilingual/literate patient education materials on exacerbating factors are required. Lactose intolerance usually develops after 3–4 years of age in Asians with prevalences between 75%–100% (Flatz, 1989). Severe deficiencies may require avoidance of dairy products and alternative calcium supplementation.

Domestic Violence

Similar to the overall population, domestic violence has been identified as an emerging issue within the APIA community. There were a total of 1,242 arrests among APIAs for domestic violence compared to a total of 21,190 among whites (CDJLEC, 1994).

However due to cultural views on domestic violence, a high probability for significant underreporting among APIAs is likely. A 1990 study of undocumented women in the San Francisco Bay Area found that 30% of the Chinese and 20% of the Filipina women reported experiencing domestic violence (National Council for Research on Women, 1995).

Although there is no California specific data, indications of the existence of violence against APIA women are documented. In 1991, approximately 10% of the women killed by a boy-friend, husband or partner in Massachusetts were Asians, although Asians are only 2.4% of the state's population (APIAHF, 1992).

Of the approximately 3,000 Pacific Asian clients served by the Center for the Pacific Asian Family in Los Angeles between 1978 and 1985, one-third were Korean, one-third Southeast Asians (mostly Vietnamese), and the remaining were distributed among Chinese, Filipinos, Japanese, South Asians, Thais, Samoans and others (APIAHF, 1992).

Two-thirds of the population at the Center for the Pacific Asian Family are children. One-fourth of them have been abused in the past; the remaining children are at the risk of abuse by both parents (APIAHF, 1992).

F. Mental Health

Data on California APIA mental health are inadequate. There are no standardized surveillance reports that identify mental health problems among APIA ethnic subgroups. Information is limited to a few California studies and county utilization reports. A 1992 California Household Mental Health Survey (Meinhardt, et al., 1994) showed that APIAs (in addition to Blacks and Hispanics) have more impairment of mental status than Whites. Vietnamese with limited or no English language skills had the highest proportion with impaired mental status showing 7.4% mentally disabled compared to 1.1% for the general population. This study also revealed that despite a higher prevalence of mentally disabled among Blacks and APIAs, both groups report lower levels of disability payments than White counterparts. The County of Los Angeles Department of Mental Health reported serving a total of 652 Chinese clients during the 1984–85 fiscal year, of whom 97 were children under age 18. For the following fiscal year, the number rose to 873, and of these, 115 were children under 18.

Diagnostically, these clients ranged from adjustment disorder to psychotic disorders. Additionally, data from various urban community mental health service agencies and programs provide a better diagnostic picture. At the Asian Community Mental Health Services in Oakland, California, sixteen Chinese children and adolescents were seen during the 1987–88 fiscal year (Gibbs, et al., 1988, 1989). Of these, six were under age

13 and ten were between 13 and 17; six were female and ten male. Statistics gathered by the Clinical Information Service of the Department of Mental Health in Los Angeles, an area with a high concentration of Japanese, illustrate the range of cases that have been treated (Gibbs, et al., 1987). A total of 879 Japanese clients received public mental health services in Los Angeles County from 1985–86. Of this total, 12.5% (N=110) were 21 years of age or younger. The majority of clients from the youth group were between ages 13 and 21. The Los Angeles County statistics also showed that Japanese boys (62% of total cases seen) were seen more frequently for outpatient care than girls. The most common primary diagnoses for Japanese youth at the time of initiating outpatient services were adjustment disorders, conduct disorders, affective related disorders, and schizophrenia-related disorders.

Reports on APIA subgroups outside of California indicate a high prevalence of psychiatric disorders including post-traumatic stress disorder and depression (NIMH, 1974; President's Commission on Mental Health, 1978; Sue, 1994; Westemeyer, et al., 1984).

APIAs are also affected by substance abuse problems. Unfortunately inadequate surveillance, insufficient research, and terribly inadequate funding hinder efforts to more readily address this issue. The State Attorney General's Fourth Biennial Statewide Survey of Drug and Alcohol Use Among California Students in Grades 7, 9, and 11 had a sample size of about 8,000 students (CA Attorney General, 1993). A total of 56% of Asian and Pacific Islander students sampled in the 9th and 11th grades drank beer, wine, or spirits at some point in their lives while a total of 11% drank weekly. Twenty percent reported smoking tobacco at some point in their lives and 6% used tobacco weekly. The study showed that APIAs in California use alcohol and tobacco at rates similar to Blacks, although at a lower rate than Whites. With regard to illicit drugs, the same age groups reported the total proportion of APIA students disclosing any use of illicit drugs (i.e., marijuana, cocaine, amphetamine, LSD) at 20%, which is a lower rate than other groups. It is known that APIA subjects tend to under-report drug use and that the statewide trend in substance abuse by APIAs is increasing, whereas other groups are remaining at about the same levels (Austin, 1995).

G. Oral Health Issues

Some statewide dental health data exist for childhood populations, but none exists for adults or the elderly. No ethnic subgroupings can be evaluated. One study of Korean elderly concluded that there was significant plaque disease despite recent dental health care—pointing out that most visits were for prosthodontic and emergency care (Lee, 1992). APIA children in California and Hawaii have very high levels of need for prevention and treatment of dental disease. APIA children in California Head Start Programs were found to have the highest prevalence (20%) of baby bottle tooth decay (BBTD) compared to 14% for all Head Start children.

Percent Children, 4–5 years, with Baby Bottle Tooth Decay*

All U.S. Children 4–5 years ^{3,4}	1993–94 California ⁵	1993–94 Hawaii ⁶	1986–87 California & Hawaii ⁷
1–11	20**	22.4	28.8

*Baby Bottle Tooth Decay was defined as the carious involvement of three or four maxillary incisors.

**Children in Head Start programs.

As seen in the above table, these are comparable to percentages of 22.4% and 28.8% from surveys of APIA children in Hawaii and California (Greer, 1994; Louie, et al., 1990). The general U.S. population prevalence of BBTD ranges from 1%–11% (USDHHS, 1989; Ripa, 1988). Thirty-percent of preschool APIA children, 71% of 6–8 year olds, and 45% of 15-year olds had untreated dental decay, and significant proportions of these required urgent dental treatment (Pollick, 1995). The *Healthy People 2000* objectives for the latter two are 20% and 15%, respectively and were grossly exceeded (USDHHS, 1990). Only 16% of the state population benefits from fluoride in the community water supply. Therefore, while most APIA children do not benefit from this cost-effective dental decay prevention modality only 30% of preschool, 14% of 6–8-year old and 8% of 15-year old APIAs took fluoride tablets. Dental sealants are effective in preventing decay, yet only 8% of 8-year olds and 1% of 15-year old APIAs have sealants compared to the general population at 10% and 12.6%, respectively. The *Healthy People 2000* objective for dental sealants is 50% (USDHHS, 1990). Access to dental care plays a significant role in obtaining preventive services.

Although 80%–85% of the U.S. population has some form of health insurance, less than 45% have dental insurance. The percent of APIAs with dental insurance is unknown, but is unlikely to be more than 45%.

H. Child and Adolescent Health

There is a marked paucity of data on the health status of APIA children nationally and specifically in California. The Task Force of the American Academy of Pediatrics in their report titled “Minority Children’s Access to Pediatric Care” noted, “... Although the Task Force uncovered limited available health statistics for African American, Latino, and Native American children, an extensive review of the biomedical literature failed to uncover any nationally representative sources of information on Asian (and Pacific Islander) children.” The Task Force, while noting the relative lack of consistent representative data for other minority groups stated, “Asian Americans (and Pacific Islanders) should be highlighted as a group about whom even less is known.” They encouraged the Academy to call for more comprehensive data collection on the health status of Asian American children and adolescents and to support the efforts of other organizations (in both the public and private sector) in this endeavor. They concluded that the current measures do not adequately reflect the health of our children, particularly minority group children, adolescents and young adults (American Academy of Pediatrics, 1994). The limited data presented above strongly suggest that problem areas include teen pregnancy, STDs and HIV/AIDS, violence/homicide, hypertension, smoking, alcohol consumption and other substance abuse, trichinosis, bacterial gastroenteritis and hot water burns (infants and children).

Additionally there are several psychosocial issues related to the unique combination of cultural and intergenerational dynamics of APIA subgroups that require further exploration. Below are examples collected from a single San Francisco practice (Ng, 1995). Chinese parents have been known to send their children away mostly to China during infancy for 1–3 years to live with grandparents. The full impact of two major separations at this early stage of development requires study. Even without geographic separation, immigrant grandparents with limited English proficiency often become major caretakers for infants and young children. Caretaker social isolation and lack of exposure

during infancy for 1–3 years to live with grandparents. The full impact of two major separations at this early stage of development requires study. Even without geographic separation, immigrant grandparents with limited English proficiency often become major caretakers for infants and young children. Caretaker social isolation and lack of exposure to new knowledge and approaches to child rearing can result in less physical and mental stimulation and more nutritional deficiencies among infants and young children. Immigrant and refugee parents often bear histories of major physical and psychological trauma that have yet to be processed. They continue on with limited health information exposure and are preoccupied with harsh struggles for economic survival—conditions not conducive to raising children in an optimal empathetic and nurturing environment. Arranged marriages still occur among immigrant families. The worst results can leave devastated parents (both mothers and fathers) as sole caretakers of children or as victims of spousal abuse, violence, alcoholism and gambling. Even when parents recognize the need for professional counseling assistance, there are few cross-cultural practitioners or culturally competent facilities to address their unique needs.

I. Women's Health

As a whole, APIA women are not a frequently researched group, and women's health needs and issues within this population receive even less attention. Thus, there is limited information on the health-related issues that face Asian and Pacific Islander women living in California. Specifically, the California data sets presented above do not fully describe and explain the impact of gender, culture, ethnic identity and acculturation on variances of disease prevalence patterns and risk factors. Community-based research has shown there are a myriad of sociocultural considerations which impact the health and well-being of Asian and Pacific Islander women. For example, Chinese women are reluctant to seek breast, cervical cancer screening due to the cultural factors of female modesty such as nudity, obedience, and shame about reproductive matters (Ho, 1992). Based on information from focus groups conducted in California, APIA women usually did not go to the doctor until a symptom (usually unbearable pain, bleeding, etc.) appeared (APIRH, 1995). In addition, there was a heavy reliance on home remedies and folk treatments among immigrant and refugee women (APIRH, 1995).

Other studies have also shown certain APIA groups utilize the services of traditional healers (Maclean, et al., 1984) suggesting these ethnic groups may hold very distinct beliefs about sociomedical activities that perhaps act as cultural barriers to the use of Western medical practices (Pinhey, et al., 1994). APIA women who participated in focus groups, when asked what their health needs were, requested more information about women's health, reproductive health programs and services, assistance with social and cultural adjustment to living in the United States, educational resources for APIA families and communities, and more programs that address domestic violence (APIRH, 1995). It is equally important to contextualize APIA women and their children's health within the welfare and immigration reform effort in California. APIA women who are immigrants, refugees or undocumented are particularly vulnerable to worker exploitation (occupational hazards, low wages, no health benefits, sexual harassment, etc.) and are likely to face barriers to health care. While a recent federal court ruling has declared key portions of Proposition 187 unconstitutional, many have been denied health care and out of fear of being deported did not seek necessary medical treatment (National Council for Research on Women, 1995). Currently, legislation is being considered to deny prenatal care services to the undocumented. Overall, the imminent changes in welfare eligibility based on immigration status will have detrimental impact on newcomer communities who already receive substandard health care, particularly women and their children.

J. Elderly (>Age 65) Issues

Key issues concerning APIA elderly emphasize barriers to access. Poverty is an ever present concern. For example, the Association of Bay Area Governments Regional Data Center 1990 Census data show that for APIAs over 65 years that a relatively higher percentage (35.3%) have incomes below \$5,000 annually compared to 23.6% of White households between 65–74 years (ABAG, 1992). Legal Permanent Resident (LPR) APIAs face an additional threat from pending congressional legislation (H.R.4) and immigration reform which would exclude them from public assistance programs such as Medi-Cal and SSI (ACCIS, 1994). Currently, approximately 37.4% of LPR APIA elderly receive some form of public assistance. (*See table.*)

Percentage of LPR Receiving Public Assistance Income by Age Group

Asian & Pacific Islander Ethnicity	LPR, Under 65	LPR, 65 and Over	% of 65+ among LPR receiving PA
Chinese	2.8%	36.2%	56.1%
Filipino	1.1%	34.3%	77.4%
Japanese	0.5%	10.2%	45.2%
Asian Indian	1.2%	30.2%	51.1%
Korean	1.1%	44.2%	75.5%
Vietnamese	12.3%	53.8%	17.0%
Cambodian	20.9%	53.5%	7.6%
Hmong	23.6%	66.4%	11.2%
Laotian	14.8%	58.3%	11.3%
Thai	1.2%	44.2%	48.8%
Other Asian	1.7%	29.5%	34.2%
Hawaiian	0.0%	0.0%	0.0%
Samoan	4.3%	16.8%	14.2%
Tongan	0.8%	5.7%	39.5%
Chamorro	5.9%	67.6%	33.2%
Other Pacific Islander	1.5%	20.9%	18.1%

Source: Asian & Pacific Islander Center for Census Information and Services (ACCIS) at the Asian & Pacific Islander American Health Forum; San Francisco for 1990 Census PUMS File (5% Sample)

Language and cultural differences impact APIA elderly health care needs. In Alameda County, 4,890 (3.8%) of elderly APIA households are linguistically isolated (no one over the age of 13 in the household speaks English “well”), compared to 1.4% for Spanish-speaking and 1.7% for other languaged elderly (ABAG, 1992). Elderly APIA immigrants have greater difficulty learning English and adhere to native cultural practices and beliefs which influence utilization of U.S. mainstream health care and compliance (Dong, 1987). Extended families in Vietnam emphasize self-help, seeing doctors only

when very sick and not able to work. For the elderly these cultural concepts are even stronger.

Low Utilization

Such barriers and cultural differences lead to low 1993 hospital utilization as described earlier. This pattern is consistent with other studies including Hmong refugees in one Minnesota county who had a high percentage of elderly not utilizing physician services (Boult, 1995). Also 1985 national data revealed that Asian elderly utilized emergency rooms more than their other racial counterparts (Liu & Yu, 1985).

There is little data available on mental health needs of elderly APIAs. Higher suicide rates were noted among elderly Chinese (23.07/100,000) and Japanese (22.51) female immigrants compared to White (21.02), African American (7.14) and Native American (3.45) counterparts (McIntosh & Santos, 1981) with similar patterns in California Vital Statistics between 1988 and 1991 (APIAHF, 1994). Post-traumatic stress disorder, depression and isolation also affect the APIA elderly.

Long-term Care Needs

Similar to the general population, APIA elderly and their families face an increasing need for long-term care. Culturally-based family support may extend the time frail APIA elderly are cared for at home and lessen the demand for skilled nursing facility services. However, this requires investigation. An excellent, cost-effective, culturally competent long-term care model has been developed (On Lok Senior Health Services, San Francisco) and is being replicated nationally.

The Disabled

No data or studies exist regarding California's APIA disabled community. The APIA community participation has been minimal in the movement towards passage of the American Disabilities Act. Cultural "taboo" and "loss of face" are hindrances to the acceptance of disabled persons within the immigrant Asian family structure. In addition to barriers related to specific disabilities, disabled APIAs also face cultural/linguistic access barriers to essential health and rehabilitative services. Only one APIA-specific agency currently operates in California (Asian Rehabilitation Services).

K. Gay, Lesbian, Bisexual and Transgendered Issues

There has been little research conducted on the health status of gay APIA men, lesbian APIAs, bisexual APIA men and women and transgendered APIAs. Most of the data and research reported has been associated with HIV/AIDS (*see Reportable Disease Section*). High rates of stress and depression (70% of 150 respondents) have been reported among gay APIA men (Choi, et al., 1995). Another San Francisco study reported a high rate of depressive symptoms (12 of 14 interviewees) and high rates of substance use (71% alcohol, 46% marijuana), but a low rate of utilization of psychiatric mental health services among HIV+ gay and bisexual APIA men. (Nakajima, et al., 1994). Another Orange County study reported that unacculturated gay, bisexual and questioning Vietnamese immigrants experience isolation due to language barriers, limited knowledge about the gay community and insularity of their ethnic community. (Carrier, et al., 1992).

L. Environmental Health

An invisible segment of APIAs is impacted by social, economic, and environmental problems, yet they are only beginning to organize for environmental protection on a broad scale with Environmental Protection Agency (EPA) assistance. In contrast to other minority groups, very little has been written or researched on environmental justice in Asian and Pacific Islander communities (Lee, 1993).

In and around their homes, APIAs face a special set of environmental health hazards, including increased exposure to lead, higher consumption of fish that may be contaminated with pollutants, and exposure to a variety of toxins due to specific religious or health practices. Pacific Islanders on the U.S. mainland emigrate from areas like the Marshall Islands where U.S. nuclear testing has rendered their homelands uninhabitable.

Lead Poisoning

APIAs are overexposed to lead in the air, soil, and water due to their primarily urban dwellings. Many APIAs live in older homes with lead-based paints, which increases their exposure to airborne lead. In San Francisco's Chinatown, where most of the immigrant Chinese community lives, 74% of housing was built before 1950 and used

lead paint (Ow-Wing, 1992). Lead in soil is also a problem for the APIA community, especially urban gardeners. In 1987, a Laotian family's children had blood lead levels of 25 ug/dl, as their home was located next to an abandoned factory designated as a Superfund site (Richmond, California). Signs warning people of toxic dangers present in the soil were printed in English only (Lee, 1992). Lead in drinking water and in ground water may be a problem for APIA communities as well, especially those working as migrant laborers in rural areas of the arid West. APIAs have higher exposures to lead through the use of traditional ceramic tableware and certain home remedies and cosmetics. Popular Eastern ceramics are often coated with a glaze containing lead and sometimes leach lead if not properly fired (Hong, 1992).

Water Pollutants

APIAs live in highly urbanized areas with large waterways which were industrial dumping grounds prior to effective regulations. Unbeknownst to most newly arrived Asian immigrants, they, especially Vietnamese, rely on self-collected fish and other marine life as their primary protein source. Informal studies and interviews suggest that APIAs consume fish and seafood up to ten times more than the national average. And, that the harvested seafood includes fish species and body parts not usually considered in fish advisories and consumption studies.

A comprehensive San Francisco Bay study warned that bay fish are so contaminated with PCBs, mercury, dioxin, and pesticides that health officials issued an advisory against consuming them more than twice a month (Regional Water Quality Control Board, 1994). Many of the test sites were piers where APIAs frequently fish. Asians consume fish at greater rates than the U.S. average, so water pollution regulations to protect the average population may not be adequate (EPA, 1995). San Francisco's South-bay Anglers for Environmental Rights, surveyed 300 local Korean, Vietnamese, Filipino, and Latino fisherman with limited English reading skills. They found that most were unaware that striped bass, croakers, perch, shark, and sturgeon could contain chemical pollution and cause long-term illness (Lee, 1993).

Mercury and Other Poisons

Southeast Asian families apply Surma, a finely ground gray or black powder, to the conjunctivae of infants, children, and sometimes mothers, for cosmetic purposes and to “strengthen the eyes” (Simon, et al., 1989). Mercury and arsenic are also found in traditional Asian medicinal preparations. Certain Asian religious ceremonies involve practices exposing children and adults to mercury vapors, which can cause serious nerve and kidney damage. Young children and children born to women exposed to mercury during pregnancy may be especially sensitive.

Inner-City Poverty

Most inner-city APIA communities have high population density, proximity to traffic, poor sanitation, vermin, garbage and other environmental hazards associated with urban decay zones. San Francisco Chinatown is one of the most densely populated neighborhoods in the U.S. with 228 persons/acre, 7.2 times higher than the city average (Ow-Wing, 1992).

M. Occupational Health

Ensuring occupational health is a critical element in maintaining and improving health status. Again, our surveillance systems do little to track APIA-specific occupational health and risks. Toxic properties and health effects of many environmental contaminants were originally discovered in workplace settings where workers were repeatedly exposed to high doses of such contaminants (Friedman-Jimenez, 1994). Asian immigrant workers are at particular risk. Limited English proficiency prevents them from grasping the scanty information available on health hazards. As new immigrants unfamiliar with the American system, they are afraid and unaccustomed to speaking out and complaining about hazardous work conditions and job-related illness. Furthermore, once reported, many employers and health professionals ignore their symptoms or complaints and fail to associate them with hazardous working conditions.

Limited data that do exist confirm APIA representation in occupations at risk for toxic exposures or hazards. “New” immigrants work predominantly in the electronics industry, cosmetology, dry-cleaning, and clerical jobs. In the “high-tech” industries, Asians now hold 20% of all jobs while Asian managers and technical professionals comprise 16% of

this workforce. The majority of new Asian immigrants work in low-paying and unskilled jobs such as laborers, operators and assemblers. APIAs make up 43% of Silicon Valley electronics workers in assembly and operative jobs (Young-Im, 1992). Many jobs involve the use of and exposure to highly toxic chemicals and solvents which can cause acute symptoms such as headaches, respiratory illnesses, and dermatitis. Parental exposure to hydrocarbon products may increase childhood leukemia. A mother's employment in the cosmetology industry is also associated with the risk of childhood leukemia (Chu, 1992). Overuse or cumulative trauma disorders commonly occur among workers in the garment and service industries, such as hospital, home care, hotel, restaurant, warehouse and data entry workplaces. Asians are highly represented in these areas (Lee, 1985). In the San Francisco Bay Area, 53% of all textile and apparel workers are Asian women and 28% are Asian men. They work with environmentally unsafe chemical dyes in poor ventilation, leading to headaches, nosebleeds, vaginal bleeding, cancer, etc. (Chin, 1991). California's APIA farm workers are mainly Cambodian and Vietnamese refugees. They receive no information on the hazards of pesticide exposure (Lee, 1993).

Workers in small businesses are also exposed to environmental hazards such as air pollution. In Southern California, 60% of dry cleaner owners are Korean while 80% of their workers are Hispanic. Not surprisingly, language barriers limit information dissemination.

The U.S. EPA is funding development of Korean videos to help small dry cleaners reduce their toxic chemical use (Harris, 1992). Toxic chemical use is also present in the following jobs commonly filled by APIA workers: janitorial services; semiconductor chip manufacturing; printing; and metal plating. For example, a Laotian man in Richmond, California, was exposed to both lead fumes produced when soldering radiators and lead dust created when cleaning radiators (Lee, 1993).

4. Barriers in Accessing Quality Care

A. Utilization Trends

Compared with other groups, Asians and Pacific Islanders are less likely to visit a physician, have a regular source of health care, have routine preventive health checkups, and are more likely to use the emergency room as the first place for treatment (Mayeno, et al., 1992). Previous studies showed that Asians and Pacific Islanders had low rates of visits to physicians, 1.55 compared with all races 2.58 (Yu & Cypress 1982). However, the study also showed that, Asian and Pacific Islanders had the highest rate of emergency room use (30%), compared with other races, (8.2% for Whites and 18.3% for Blacks). These findings were based on the National Health Interview Survey data from 1976–1978. A Korean Health Survey in Los Angeles also found that the physician utilization rate by Koreans was one-third that of Whites (Korean Health Survey Task Force, 1989).

For preventive care, Asians and Pacific Islanders tended to report lower rates of blood pressure screening as compared to Whites, within the past two years: 92.2% vs. 96.4% for women and 85.6% vs. 92.8% for men. (1991–92 BRFSS, CDC, 1994). The same report indicated APIAs also had lower rates of cholesterol screening within the preceding five years than did their White counterparts, 57% vs. 69.3% for women and 54.1% vs. 63.5% for men. APIA women were less likely to have a routine checkup than were White women, 73.1% vs. 77%. More APIA women and men than White counterparts never had a routine checkup, 3.3% for APIA women vs. 1.8% for White women, and 5.1% for APIA men vs. 3% for White men.

Though limited, the data strongly suggest that this population has low health care utilization. As True (1985) pointed out, whereas low utilization can be equated with or related to low morbidity or absence of need, other factors—including barriers to care—affect utilization rates. Asians and Pacific Islanders, like other Americans, are affected by health care access barriers, skyrocketing costs, fragmentation of the health care

system, and maldistribution of health care resources. However, their problems are further exacerbated by financial, linguistic and cultural barriers unique to Asians and Pacific Islanders.

B. Financial: Bipolar Distribution (SES: Income, Education and Occupation)

Financial barriers to health care for APIAs deserves special attention. APIAs often are erroneously perceived as a “model minority,” all of whom have succeeded in mainstream society through hard work and self-reliance. However, contrary to the prevailing myth, APIAs are more likely to live below the poverty level than their White counterparts in California, 14.3% vs. 9.1% (US Census, 1993).

APIAs are characterized by a bipolar pattern in many socioeconomic indicators (Lin-Fu, 1988). The bipolar pattern is closely related to the intrinsic heterogeneity of the group, not only in terms of ethnicity, but also in terms of nativity, length of residence, and degree of acculturation (Lott & Pian, 1979).

Bipolar distribution was apparent among several APIA ethnic groups. The following table shows percentage of population living below poverty among APIA ethnic groups in California. While Japanese and Filipinos had less people living below poverty than Whites, Southeast Asians had three to six times more than whites living below poverty.

Percentage of Persons Below Poverty Level by Ethnicity, 1989

Hmong	62.6 %
Laotian	50.6 %
Cambodian	47.3 %
Vietnamese	27.4 %
Samoan	22.5 %
Hispanic	21.5 %
Black	21.1 %
Guamanian	14.2 %
Korean	13.7 %
Chinese	12.8 %
Hawaiian	12.4 %
Thai	12.2 %
Asian Indian	10.3 %
White	9.0 %

Source: US Census, 1990 Census of Population, Social and Economic Characteristics, California

The Bipolar Distribution Also Exists Within One Ethnic Group

Taking Chinese in California as an example, though their family median income (\$43,282) was higher than Whites (\$40,559), the percentage of families living below poverty was also much higher (10% vs. 6.2%). Similarly, a bipolar pattern is evident in educational attainment. Although the percentage of Chinese with bachelor degrees or higher (37.5%) was higher than Whites (25.4%), the percentage of Chinese who were functionally illiterate or had 0–4 years education (10.3%) was four times more than White counterparts (2.6%) (US Census, 1993). Chinese had more workers in managerial and professional specialty occupations (35.25%) than Whites (31.94%). Chinese also had more people 16 years and over not in labor force (35.5%) than Whites (33%) (US Census, July 1993).

For many APIAs who work in small business sectors, employment-based insurance often is unavailable or inadequate. Only 51% of working Asians have employment-based health insurance, compared with 65% of the non-Hispanic White population and 52% of the non-Hispanic Black population (Brown, 1989). Furthermore, 20% of the APIA population in California are uninsured compared to 16% of the non-Hispanic Black population and 15% of the non-Hispanic White population (Brown, et al., 1991). As indicated below, some local surveys have shown even higher rates of APIAs without health insurance.

Asian Pacific Islander Americans without Health Insurance, as Shown by Local Surveys

Ethnicity	Number Surveyed	% of Uninsured
Chinese Oakland (Lew & Chen, 1990)	296	35.1
Korean Los Angeles (Korean Health Survey Task Force, 1989)	350	50
Southeast Asians San Diego (Rumbaut, et al., 1988)	739	37
Vietnamese San Francisco Bay Area (Jenkins, et al., 1990)	215	15
Asian Women from Southern California (National Council of Negro Women, 1991)	304	21

C. Language and Culture

In addition to health care access barriers faced by all Californians, APIAs face linguistic and cultural barriers.

Limited English Proficiency, Literacy Levels

The physician-patient relationship is built through communication and effective use of language (Woloshin, et al., 1995). Unfortunately, about a half million APIAs in California are unable to have such a relationship with their physician. According to the 1990 Census, 482,285 APIAs in California reported that they did not speak English “very well” or “not at all” (US Census, 1992). The language problem is compounded by the existence of over 100 distinct APIA languages and dialects.

The language problem was much more acute among APIAs from Southeast Asian countries. A local survey conducted in San Diego revealed that 60% of the Southeast Asians surveyed cited language as a major problem in obtaining health care (Rumbaut, et al., 1988). Eighty-five percent were Khmer, 83% Hmong, 54% Chinese/Vietnamese, and 28% Vietnamese. In addition to a significant number of APIAs who could not read or write in English, many of them could not read or write in their native languages either. An Oakland Chinese Community survey found that 38% of 296 Chinese-speaking respondents could not read Chinese (Lew & Chen, 1990).

Without language assistance services, APIAs with limited English-speaking skills and low literacy are less likely to seek needed care and adhere appropriately to treatment plans. Barriers to health care are much greater for recently arrived APIAs who know little about the U.S. health system. They are often burdened by unfamiliarity with and even fear of health care in a new environment. Immigration status also presents a major access barrier for APIAs. Many immigrants are precluded from public assistance programs because of eligibility restrictions for the newly arrived. For those who do qualify, confusion concerning eligibility for services and concern about jeopardizing their immigration status or their relatives, chances to immigrate are frequent deterrents to the use of those services.

Traditional Beliefs, Practices, Attitudes and Values

APIAs who hold traditional health beliefs or who are recent immigrants are less likely to be familiar with Western biomedical concepts of disease as well as modern diagnoses and treatments. Instead, they believe that disease is caused by supernatural forces, by an imbalance between body and environment, Yin and Yang or cold or hot forces in the body (Lin-Fu, 1994). In many Asian and Pacific Islander cultures, illness is typically defined by symptoms (Lin-Fu, 1994). Therefore, treatment of an asymptomatic illness, such as preventive treatment for skin-test-positive TB patients or a focus on preventive screening, may not be fully understood and accepted. In another example, because blood is considered sacred in many APIA cultures, some APIAs dislike blood sampling. Some APIAs do not like other invasive procedures, such as pelvic examinations and Pap smears, especially for unmarried women. There is a growing body of knowledge of clinical use of herbs, which are used frequently by APIAs. However, the collection and processing of herbs are not controlled, which may yield contaminated products. There have been several reports of adverse reactions such as heavy metal poisoning, agranulocytosis (Dolan, 1991; Lightfoote, 1978; Ries, 1975; Siao, 1989; *The Medical Letter*, 1977). Health care providers who do not have a cross-cultural awareness often fail to understand the role that culture plays in shaping concepts, beliefs, and practices concerning health and illness. Gaps in understanding and communication may lead to fear, distrust, or frustration and further deter APIA patients from seeking necessary care.

D. Structural and Systems Barriers

Inadequate Culturally and Linguistically Sensitive Services

Culturally and linguistically appropriate services for APIAs are in short supply among mainstream health systems. Consequently community-based health centers and ethnic providers are relied heavily upon and have become essential providers of health care for APIAs.

The socioeconomic, cultural and linguistic barriers cited are likely to deter many APIAs from accessing and using needed services. The availability of culturally and linguistically sensitive health care system is crucial for this population. Nonetheless, the current health care system is still not equipped to manage the cultural differences

between providers and patients. Mainstream delivery systems often do not recognize traditional concepts of illness and disease common among many Asian and Pacific Islander cultures. Data show that immigrants, particularly those from developing countries, are most likely to seek care at community health centers instead of in hospital-based outpatient clinics or from private physicians (Dutton, 1986). This is largely due to the fact that these community health centers provide culturally and linguistically sensitive services, offer services free or on a sliding fee scale, and are also located in greater proximity to where patients live (University of California, 1994). Unfortunately, these services are far from adequate in terms of their numbers and capacities. For instance, Asian Health Services in Oakland was forced in April 1992 to place a moratorium on most new patients as a result of a seven-month waiting list for initial medical appointments. Fresno, Long Beach, Sacramento, and Stockton have over 25% of APIAs who live below poverty and over 32% APIA households that are linguistically isolated (US Census, 1993). However, there are few, if any, such community health centers in these areas that provide linguistically and culturally appropriate services to low-income APIA populations.

Inadequate Staff Development for Cultural Competence

Current formal and continuing education for medical staff have not adequately addressed cultural needs of minorities such as APIAs.

Health practitioners in California face the challenge of providing culturally sensitive and appropriate health care to patients with different health beliefs and values. Health providers for California's culturally diverse population need to relate to the patients, values and beliefs instead of asserting their own views. However, there are inadequate resources for staff development regarding cultural competency. Based on a survey of all 126 U.S. medical schools done in 1991–92, only 13 of 98 schools that responded had offered cultural-sensitivity courses (Lum & Korenman, 1994). All but one of these courses were optional and had low student enrollment (5%–10%). Despite anticipated high level of student interaction with minority patients, recent graduates were perceived to be “somewhat prepared” to provide culturally sensitive clinical services courses (Lum & Korenman, 1994). There are also no formal continuing educational materials developed on the subject.

The specific characteristics and problems of APIAs are further overlooked in medical and health education, at least in part because APIAs are not considered to be under-represented minorities (Lo, et al., 1993). There are two issues regarding this myth: 1) APIA providers are not automatically culturally competent or even literate in all APIA cultures; 2) APIAs do not just have one culture. In summary, multicultural issues must be addressed at all levels of health education and throughout the entire career of every health professional.

Inadequate Data Collection Systems

Asian and Pacific Islander health status and health service utilization remains the most poorly understood due to inadequate national and local surveillance systems, surveys and reports.

This is due to several factors: the National Medical Care Utilization and Expenditure Survey, the National Health Interview Survey, and BRFSS lack sufficient numbers of APIAs in their samples for a valid and reliable description of health status and health care utilization for these populations; most national and state data lump Asian and Pacific Islanders into one group, while others include them in a residual “other” category, (e.g., National Medical Expenditure Survey), which identifies only “Black,” “Hispanic,” “White,” and “Other race;” California Hospital Discharge Data still lump APIA into one group and sometimes include them in the residual “other” category; all the national surveys are administered in English, thereby excluding non-English speaking respondents; racial misclassification has also been identified as an issue for APIAs for data, such as birth and death records; and, some crucial data items for understanding APIA health status, such as English proficiency, primary language and year immigrated, have never been collected in the current public record system.

Inadequate Knowledge, Research and Ethnic-Specific Methodologies

Research into health beliefs of APIAs is also lacking. Because of the ethnocultural uniqueness of APIA groups, there are several methodological concerns for conducting research among Asians and Pacific Islanders regarding use of secondary data and collection of primary data (Takeuchi & Young, 1994).

The details are as follows:

Secondary Data Analyses

- Quality issues of existing data, e.g. accuracy of data, missing data, and ethnic misclassification.
- Availability of the data, especially with ethnic breakdowns and certain meaningful variables, such as English proficiency, nativity, and generation.
- Existing national surveys are inadequate due to sampling methodology, lumping, and restricted interview languages (English and Spanish only).
- Little data is available for APIAs in the low end of bimodality.

Primary Data Collection

- Cultural appropriateness of the design. Existing standard instrument, concepts and measurements are not necessarily transferable from one cultural group to another.
- Translation should be accurate and fit the literacy level of the respondents.
- Sampling methods applied to APIAs may not be inclusive, especially for the new immigrant population (e.g., using telephone directories to draw sample might not be appropriate because a significant proportion of APIA households do not have telephones).
- Interview modes, e.g. phone interviews, may be less appropriate and acceptable for APIAs than for general Americans.
- Community sensitivity and empowerment in the design and implementation. Unfortunately, there is often uneasy tension between the communities and researchers.

Anti-Immigrant Legislation and Environment

In 1994, California voters passed Proposition 187, which would require health care providers, schools, county social service departments and police to verify the immigration status and documents of all their patients, students and clients and to deny services to any individual they “suspected” of being undocumented. While federal and state courts have temporarily enjoined the implementation of Proposition 187, an anti-immigrant climate continues to be pervasive in California. Currently, over a dozen bills restricting the access of immigrants and refugees to public education and health services and mandating “English-only” policies are pending in the California Legislature. A

major legislative battle will continue over denying prenatal care to undocumented immigrant women (AB 326 and AB 668).

Meanwhile, federal legislation will eliminate eligibility for many safety net programs for legal immigrants. The so-called welfare reform bill, H.R. 4, will end eligibility for SSI and Food Stamps for any individual who is not a U.S. citizen. This change will have a severe impact on California's APIAs who are elderly, disabled, or low-income children. States also will have the option of disqualifying noncitizens already in the U.S. from Medicaid, Title XX social services and the new block grant Aid to Families with Dependent Children (AFDC) program. Immigrants who arrive in the U.S. after the enactment of the welfare reform bill will automatically be disqualified from SSI and Food Stamps as well as from Medicaid, Title XX, AFDC, public/ community/migrant health programs, senior nutrition, child care, job training, public housing, legal services and all other income eligibility-based federal programs until they become U.S. citizens or work 40 "qualifying Social Security quarters," or at least ten years. All federal programs will be required to verify the immigration status of their applicants and recipients, with limited exceptions for some emergency services. The resulting bureaucracy, especially in health education and promotion programs, will undermine the effectiveness of many of these programs in immigrant communities, such as the many APIA communities.

The California Senate Office of Research estimates that Californians would lose up to \$7 billion in federal benefits over the next five years with the enactment of H.R. 4. Additional billions of dollars would be lost by local economies where those beneficiaries would live and purchase goods and services. With increases in disease, acute and emergency health conditions, hunger, poverty, unemployment and homelessness, local health and social service costs also are likely to increase. In addition, private and public health and social service institutions that currently provide services to immigrant populations will lose those most of their patients and clients, straining those often fragile institutions to economic collapse. The economic dislocation and unemployment that would result will continue a ripple economic effect throughout California.

Regardless of how states implement the federal welfare reform bill, the federal block granting of Medicaid and other health program funding with overall reductions in federal funding will place enormous pressure on states such as California to eliminate eligibility

for Medicaid and other health programs for legal immigrants. Without eligibility protected as an entitlement, state and local governments will have no alternative but to restrict eligibility for politically vulnerable populations such as immigrants.

While these restrictions on access to federal and state benefits are being enacted, Congress also is considering legislation that would reduce drastically the number of immigrants and refugees admitted to the U.S. each year. (H.R. 2202 and S. 1394). These bills would reduce legal immigration by one-third by ending the ability of U.S. citizens and permanent residents to reunite with their adult children and the ability of U.S. citizens to reunite with their brothers and sisters. Refugee admissions would be cut in half.

Other methods for obtaining legal immigration status in the U.S., including applying for asylum in the U.S. when one fears persecution, would be severely restricted. These changes would dramatically slow the rate of increase of APIA populations in California and result in major disruptions among APIA families who would remain separated or stranded from their home countries in Asia.

Inadequate Health Professional Recruitment Strategies and Policies

A major barrier to the delivery of health services to the Asian and Pacific Islander communities has been the small number of APIA health professionals that serve them. Physician recruitment strategies and policies regarding Asian and Pacific Islanders have been inadequate. This inadequacy can be directly linked to two main omissions: ethnic-specific data; and appropriate incentive programs.

Ethnic-specific data is needed on many levels. First, there is an absence of culturally and linguistically competent health providers to serve the needs of the APIA communities, yet there is the lack of data to document such needs. This includes the health and socio-economic (especially language, income/poverty status, education) status as well as hospital discharge, utilization, and prenatal care. Such data are very important for addressing the needs of and providing appropriate care for the “high risk” populations such as the limited or non-English speaking, the impoverished and the newly arrived immigrants. Such data, when made available, could be used for determining the utilization patterns of the various APIA ethnic communities. Second, the APIA ethnic-

specific health data needs to be appropriately collected and analyzed. According to a study conducted by the Asian & Pacific Islander American Health Forum, the inappropriate use of the aggregate APIA data has “adversely impacted the health professional development” for certain APIA ethnic specific communities since the aggregated APIA population is deemed “over-represented.” The study pointed out the *Healthy People 2000* and the Disadvantaged Minority Health Improvement Act of 1990 as examples of the failure to include APIA ethnic data in their programs and resources due to the notion of over-representation (APIAHF, 1995). Third, ethnic-specific data on medical students are needed to ascertain the supply-demand ratio of the targeted “at risk” ethnic groups and the recruitment of such doctors-to-be. While the Association of American Colleges does report medical student information such as ethnicity, the data are inconsistent and dependent upon the information provided by participating colleges. Furthermore, there is the misperception that there is an overrepresentation of Asians in the medical profession, particularly in primary care.

Nationally there appears to be an abundance of APIA physicians. Ten percent of all physicians were APIA, whereas the group’s population proportion was just 3%, according to the 1990 Census. However, variance in ethnic group identity, language, geographic location, education, income, immigration patterns, culture and other socio-economic characteristics are not considered. For example, the lack of ethnic distinction assumes a third-generation Asian Indian physician can provide culturally competent care to a Laotian refugee with limited English proficiency. Among APIA physicians, 44% work in physician offices, 48% in hospitals, 2% in colleges and universities, and 6% in other settings.

This finding confirms that despite an apparent over-representative supply of Asian and Pacific Islander physicians, there is a shortage of culturally/linguistically competent providers in primary care settings. Ethnic data on these professionals, their field of practice and the populations they serve are needed to identify specific ethnic groups, health fields and geographic areas requiring recruitment and policy efforts. Furthermore, information regarding country of medical training, year of immigration (if applicable), and language(s) spoken at home should be tracked. This information when combined

with community need assessments for cultural competence would assist in the development of ethnic-language-specific recruitment and training programs.

Appropriate incentive programs need to be established to help facilitate the increase of APIA health professionals serving the APIA ethnic-specific communities. For instance, while 60% of the APIA community resides in the states of California, Hawaii and Washington, 70% of APIA physicians practice in the Northeast region of the country. A system is needed to provide incentives for APIA physicians to practice where their respective ethnic populations live, as the utilization patterns are affected by the “cultural and linguistic relationship between Asian medical practitioners and patients” (Ponce, 1993). Incentives, even prior to medical school (such as in junior or senior high school), are needed for APIAs to go into primary care. According to Ponce, studies have shown that the vast majority (94%) were specialists while only 6% were in primary care. In addition, economic incentives are needed to attract international medical graduates and practitioners to earn their licenses and practice primary care in the States (Ponce, 1993). Furthermore, potential APIA physicians and other community providers in primary care will further suffer as economic reform measures threaten the college loan program.

Ethnicity and defined demographics for medical students and health professionals combined with incentive programs that will better recruit and train primary care professionals will improve access, utilization and quality of care for APIA ethnic-specific “high risk” populations.

E. Construct of “Medically Underserved” APIAs

In summary, all of the above barriers place certain APIA subgroups at “high risk” with regard to access of health care services and information. The Asian and Pacific Islander population is heterogeneous with several subgroupings. The groups with the highest percentage of foreign born and limited English proficiency, highest rates of poverty and unemployment, and least education and per capita income would be at the greatest risk. The Hmong, Cambodian, Laotian, Vietnamese, Samoan and Chamorro subgroups appear to have the highest proportions of “high risk” individuals. However, due to consistent bipolar distribution of socioeconomic indicators, each ethnic subgroup has “high risk” segments whose health needs should not be ignored.

5. Enabling Dynamics

A. Geographic Clustering

APIA communities at-risk tend to be clustered in various locations throughout California. With culturally appropriate strategies, public health campaigns and health service delivery can be carried out with reasonable expectations for high penetration. For example, the counties of Los Angeles, San Joaquin, San Diego, Orange, Santa Clara, Fresno, and Stanislaus comprised 91.5% of the state's total Cambodian population. According to 1990 Census data, the distribution of the Cambodian population among the top California cities was as follows: Stockton 15.0%; Los Angeles 6.2%; San Diego 5.7%; San Jose 5.5%; Fresno 5.4%; and Modesto 4.6%.

B. Extensive Ethnic-Specific Networks

Culture should also be looked at as an opportunity to improve health status among APIAs. Along with the emphasis placed on the physiological aspects of health, equal emphasis can be placed on cultural and environmental dimensions of APIAs.

The existence of ethnic-specific networks both locally and nationally among APIAs is an ethnic-specific asset. It can be used to effectively reach and work with the communities.

Family and Nationality/Ethnic-Related Associations

Among APIAs, there are powerful associations based on the ethnicity, regional origin, tribal affiliation, and/or family name. These associations both historically and currently play a role in meeting the needs of their members, including health care needs. For instance, the Chinese Benevolent Association in San Francisco established the Tung Wah Dispensary in 1900. In order to reconcile preference of their members and pressure from the San Francisco Medical Society, the facility hired both Western-trained physicians and Chinese herbalists (Kraut, 1990). There are also associations in the form of mutual aid. They work as an informal rotating credit association, which provide their

members a place to save and also a source of credit for those who need lump sum cash for business or other reasons. These associations also provide advocacy, networking and social services to their members (Light, 1972).

Spiritual Communities and Religious Organizations

Many Asian and Pacific Islanders practice non-Western religions, such as Buddhism, Hinduism, Islam, Shinto, Shamanism, Sikhism, Taoism, and tribal religions. Some APIAs also incorporate Christianity mainly due to European colonialism, such as Catholicism for Filipinos and Mormon religion for Samoans.

Most temples and churches for the religious activities among APIAs are ethnic-specific. They become an important center for APIA community activity including worship, socializing, and renewing their commitment to the community (Takaki, 1989). There are a great number of APIA temples and churches in California. For example, in the East Bay of San Francisco alone, there are 60 Korean churches for a population of approximately 10,000.

Media and Telecommunications

Using electronic and print outlets to reach ethnic-specific communities has been effective through building the media capacities of Asian and Pacific Islander communities. Statewide health promotion efforts have been bolstered through the identification, training and development of multilingual media spokespersons who are recognized as key contacts for mainstream and ethnic press. Reaching ethnic-specific populations has been possible through the development of relationships with key media contacts at various newspaper, magazine, television, and radio outlets in ethnic communities all over the state. Utilizing technology to improve communications, computer networks are providing statewide and national linkages for Asian and Pacific Islander health providers. For instance, at the Asian & Pacific Islander American Health Forum, current projects include using the Internet to provide rapid responses to time-sensitive policies and legislation, sharing of databases and information management.

Well-organized and Effective Human Service Models

Several excellent health service, training and research models have been established within California's APIA communities. Although penetration is woefully inadequate, they provide a template from which new programs can begin and evolve. A model for an effective health promotion network is the Asian & Pacific Islander Tobacco Education Network (APITEN), a statewide partnership for the wellness of the Asian and Pacific Islander communities. In partnership with the California Department of Health Services, APITEN is a network with over one-hundred human service providers advocating for tobacco-free Asian and Pacific Islander communities. APITEN is the only statewide Asian and Pacific Islander specific health promotion model in the state partnering community-based organizations (health providers, social service agencies, youth groups, mental health centers, substance abuse clinics), voluntaries (American Cancer Society, American Heart, American Lung Associations), businesses (merchant associations, retail stores, restaurants), and government (city ordinances, county health departments, state health programs) for the common goal of health promotion and disease prevention. A voluntary, community-based statewide advisory committee is convened quarterly to provide direction for network activities including media events, legislative education, material development, training, technical assistance and program development.

Effective Advocacy Organizations

APIA human service organizations are participating in advocacy networks. For example, the Asian & Pacific Islanders' California Action Network (APIsCAN) is a voluntary, statewide collaboration focusing on building the advocacy capacities of local Asian and Pacific Islander coalitions throughout the state. The mission for APIs CAN is to serve as a catalyst for public policy and community development that promotes health, social, economic, political equity for the diverse Asian and Pacific Islander communities through organizing, collaboration, leadership development and education. The steering committee, made up of representatives from various Asian and Pacific Islander coalitions from all over the state, has developed an advocacy framework with position papers on the impact of managed care, welfare reform, affirmative action, immigration policy on health, mental health, and alcohol and other drug services. APIs CAN hosts an annual statewide forum and legislative day in Sacramento, providing an opportunity for

participants to develop advocacy skills and build community capacities by visiting legislators and administrators.

Traditional Medicine

Traditional health practices have been used for generations among APIAs. If approached with cultural sensitivity and respect for the potential contributions, they can be a tremendous adjunct to current health promotion, disease prevention, diagnostic and treatment strategies. Many Western providers do not know the basics of such health care and are not in any position to inform patients of their effectiveness or interaction with Western therapeutics. California state-licensed acupuncturists as well as traditional herbalists are advertised in the Yellow Pages in many parts of the state. Large urban areas have schools offering master of science degrees in traditional Chinese medicine or Oriental medicine. In China there is a growing body of medical knowledge that combines the best of both worlds—traditional and Western. The Office of Alternative Medicine at the National Institutes of Health is investigating several alternative forms of health care which people are using daily. Collaborations between these different disciplines would help improve the health care of immigrant patients.

C. Communities Strongly Influenced by Local and National Leaders

APIA communities are called Little Tokyo, Little Taipei, Little Saigon, Chinatown, and Koreatown in California. Former leaders (e.g. military and elected officials, bureaucrats, intellectuals, etc.) from their native countries are still highly respected and influential. Established leaders direct their communities both formally and informally. For example, for several years the chairman of Consolidated Chinese Benevolent Association in San Francisco was regarded as the unofficial mayor of Chinatown. Tribal leaders and elders in Pacific Island nations maintain their status on the U.S. mainland.

D. Emphasis on Extended Family

When approached properly, the family can be a tremendous asset to the care of individuals and the community. For many APIAs, the need of family is often more important than the individual, in contrast to Western norms, which focus on the individual (Felice, 1986; Hoang & Erickson, 1982/1985). Family plays a pivotal role in the decision-making process. The decision on whether to seek care and what kind of care to seek is often a group process that involves the entire family. The definition of family often extends past the immediate nuclear family to include grandparents, aunts, uncles, even prominent community and religious leaders. There are many APIA families with close three-generation interactions. Grandparents often care for and bring in the grandchildren for health care. They should be involved in the discussion of child care problems. Each family must be assessed individually. In some cases one might openly support the parents who seek to become independent and progressive in the face of more traditional and resistant grandparents, whose influence can be very strong. Strategies to help parents deal with these issues need to be available.

The family unit must be considered in some important decisions affecting the patient. Advanced directives and other issues dealing with terminal patients must also involve other family members. Cultural taboos concerning death and dying may interfere with the patient's wishes to forego life support when other family members want to utilize all medical resources available. Educating adult family members may also help to encourage elderly immigrant patients with more traditional beliefs to obtain immunizations, screenings and other preventive measures. Enlisting family members may also help patients with smoking cessation and substance abuse.

E. International Relationships and Potential Impact

California is in one of the best positions to develop a relationship with Pacific Rim countries. Many APIAs are well connected with people in Asian and Pacific Island countries. There is potential for developing and conducting projects with international impact. Innovative interventions for APIA communities will not only assist us in better serving APIAs in the state, but also establish models for Asian and Pacific Island

countries. For instance, any accomplishments in control of TB, hepatitis B, or smoking will have potential state, national and even international impact.

F. APIA National Health Leadership Coalescence Trends

Three national leading organizations for improving APIA health have head offices located in California. They are the Asian Pacific Islander American Health Forum (APIAHF), the Association of Asian Pacific Community Health Organizations (AAPCHO), and the National Asian Pacific American Families Against Substance Abuse (NAPAFASA). These agencies, in collaboration with other community-based organizations and APIA communities, have advocated effectively for increasing the quality, accessibility, and availability of comprehensive community-based physical and mental health care that is linguistically and culturally appropriate for APIA subgroups. These organizations have also implemented national demonstration programs to provide technical assistance, training and coordination in culturally competent health services delivery and in health information dissemination.

In June 1995 with assistance from the Centers for Disease Control and Prevention, the first Asian American and Pacific Islander Health Summit was held in San Francisco. As the first Department of Health and Human Services inter-agency sponsored meeting of APIA health leaders and top U.S. Public Health Service officials, the goal of the summit was to set a national agenda for Asian and Pacific Islander health. The plenary sessions emphasized the need for APIA leadership development at the policy-making and administrative levels. An APIA health research summit followed in Hawaii in January 1996, sponsored by the National Institutes of Health Office of Research on Minority Health, aiming to set national research priorities for APIAs. California APIA community health representatives played strong leadership roles in convening these meetings and provide a unique state resource for future APIA health planning initiatives. Together, these historic events brought over 500 health professionals together to discuss, strategize, and prioritize the health needs of the APIA populations, and to build an infrastructure within which to manage these issues on the national level.

6. S.W.O.T. Analysis and Summary

A. Strengths

Population Characteristics

Rapid growth and strong socioeconomic sectors: APIAs are the most rapidly growing racial group in California. They offer tremendous consumer demand for services and goods. A large segment of the population contribute an industrious, entrepreneurial, well-educated and hardworking labor force to the California economy.

Diversity: APIAs represent over 30 ethnic groups, predominantly foreign-born, but with large sectors of U.S.-born natives, a broad spectrum of Far Eastern, Native American, Western and South Pacific and contemporary mainstream cultures. They enrich and broaden the California cultural landscape. In many cases a single intergenerational household may include the full breadth of immigrant, second-and third-generation American-born family members.

Positive values and healthy practices: The family is central for most APIA cultures and close linkages with the extended family is the norm. There is an equally strong sense of community and cultural pride that is passed on intergenerationally. First-and second-generation immigrants along with native Pacific Islanders may adhere to more preventive, holistic and traditional health beliefs and practices.

Geographic clustering: Clustering of several APIA subgroups in major metropolitan areas and distinct rural enclaves enhances outreach and dissemination channels for public health campaigns.

Extensive Health Leadership and Grass-roots Community Infrastructure Exists

Extensive ethnic-specific networks exist throughout California which can provide direct community participation in identifying health problems/concerns and developing long-term solutions. These include, but are not confined to family, tribal and community-specific associations, spiritual/religious groups, media and traditional mainstream civic groups. Many are linked nationally and some internationally. Several APIA health care professional associations and alternative medicine healer networks are based in California. Well-organized and effective human service models (e.g. community health centers and mental health centers) provide culturally competent services. These community sensitive groups are linked into professional networks and advocacy organizations that are building the APIA leadership pool. They have already begun collaborative efforts among community, academic institutions, and policy makers in addressing APIA community needs.

Positive Health Profile Sectors

Large segments of the APIA population exhibit healthier data profiles than mainstream populations and offer opportunities for exploring cultural determinants of good health.

B. Weaknesses

A high-risk APIA profile of “medically underserved” can be constructed based on low income, less education, limited English proficiency and/or linguistic isolation, recent immigration, and rigid adherence to certain deleterious traditional health practices.

California’s APIA community is tremendously diverse and large segments do not fit the “model minority” image. Low income subgroups often face financial barriers in accessing care. Recent immigrants from Asia and the Pacific may face more cultural/linguistic barriers to health information and services. Those that rigidly adhere to certain “deleterious” cultural health beliefs and traditions may forego Western medical advice as well as some proven effective Western practices (e.g. TB prophylaxis).

APIA ethnic diversity with well over 30 distinct groups poses a major challenge to health planners and researchers with limited resources to overcome grossly inadequate surveillance systems and culturally insensitive health status improvement strategies for California APIAs.

Current surveillance systems fail to capture the health status of ethnic subgroups. Mainstream training, services and intervention strategies that promote cultural competence for such a diverse population are woefully inadequate. Cost-effective decision-making has become the norm and will compromise smaller groups with less political support.

A health profile of major problem areas requiring strategies for identifying, monitoring and/or improving the health status of California APIAs including:

Infectious Disease: TB, hepatitis B, HIV/AIDS, parasitism, influenza

Cancer: hepatoma, nasopharyngeal, lung, breast, cervical, gastric, colon, prostate

Chronic Disease: CVA, hypertension, smoking, diabetes mellitus, cardiovascular disease.

Genetic Disease: thalassemia, G6PD-deficiency, lactose intolerance

Mental Health: depression, PTSD, substance abuse, suicide, cultural adjustment

Oral/Dental Health: baby bottle tooth decay [BBTD], dental caries, access to prevention and treatment services

Youth/Adolescents: teen pregnancy, STDs and HIV/AIDS, violence/homicide, smoking, alcohol consumption and other substance abuse, mental health, hot water burns

Women's Health: maternal-child health indicators, domestic violence, Pap smear and mammography utilization

Elderly: poverty, cultural/linguistic barriers to access (e.g. in/outpatient and home health and long-term care)

Disabled: no surveillance systems, cultural/linguistic barriers to mainstream support services and systems

Gay, Lesbian, Bisexual and Transgendered Health: no surveillance systems, HIV/AIDS, stress, depression, substance abuse, low utilization of psychiatric mental health services

Environmental and Occupational Health: lead poisoning and toxic-exposed neighborhoods; occupational hazards (especially chemical solvent and pesticide exposure)

C. Opportunities

The Foundation's APIA strategy should capitalize on the APIA community's strengths and address weaknesses and the threats to:

Stem the anti-immigrant tide and promote inclusion. Promote an environment that supports a broadly inclusive health care system—one directed towards the ongoing accurate assessment and improvement of the health status for all Californians with special attention to race, ethnicity, gender, age, class, sexual orientation, ability/disability, etc.

Positively impact managed care accountability to diverse APIA subgroups. Strengthen managed care system accountability for providing high quality, culturally competent health information and care to diverse pools of APIA registered patients.

Preserve safety net services for medically underserved APIAs. Promote safety net planning and implementation strategies that will ensure medically underserved high-risk APIA subgroup access to high quality, culturally competent health information and care.

Promote more accurate surveillance systems and cultural competence strategies for improving APIA health status. Identify critical data and research gaps for diverse APIA subgroups and promote corrective strategies that would institutionalize accurate surveillance systems and ensure culturally competent health status improvement strategies.

Engage APIA community infrastructure and health leadership pools as partners in constructing and implementing an APIA health agenda. Engage current and emerging APIA health leadership pools and tap broader, diverse APIA community infrastructure as partners with government, academia and health provider organizations in effective health planning and implementation strategies for California's APIAs.

Improve the quality and broaden dissemination of APIA cultural competence training for health professionals. Strengthen training programs to better recruit and train current and future health professionals with culturally competent skills essential in addressing policy, research and health care needs of California's diverse APIAs.

Explore positive health profiles of some APIA subgroups along with healthy cultural values, traditional practices and customs in configuring new strategies for improving general population health status.

D. Threats

Despite rapid growth of California's APIA community, there have been inadequate efforts to address the surveillance, research, health professional training and service delivery needs of this extremely diverse population.

Limited research has been conducted to increase our knowledge of high-risk groups (Yu, 1991; Kroll & Bradigan, 1993). Consequently very little is known about the health status and effective outcome-based strategies for the majority of APIA ethnic subgroups.

Continuation of APIA aggregate bias. Subgroups are lumped into the "Asian or A/PI" categories which obscures the unique health trends and research needs for specific ethnic subgroups (e.g. Cambodian).

Socioeconomic bipolarity overlooked. APIAs tend to be overrepresented at the higher and lower ends of the socioeconomic scale. Therefore frequent reliance on "median" and "average" SES indicators conceals the highest-risk APIA subgroups. Thus policy makers and the general public may neglect the medically underserved APIA community that is overrepresented in poverty level and less-educated subgroups.

Cultural competence needs for diverse APIA subgroups are overlooked. Lack of cultural/linguistically competent services and strategies create enormous barriers for diverse APIA subgroups. Cultural insensitivity and lack of familiarity with foreign traditions and belief systems severely compromises the quality of care once accessed. Insufficient attention is paid toward recruitment and staff training that will address the specific cultural/linguistic demands of California's rapidly growing and diverse APIA population.

Anti-immigrant trends and exclusionary legislation (e.g. welfare and immigration reform) will:

- Dangerously expand the “structural, systematic, organizational and personal” barriers that medically underserved APIA subgroups already face in seeking health information and services.
- Undermine efforts to promote improved surveillance, training and research initiatives that address APIA health needs.

Short-sighted, race-based recruitment of APIAs for “diversity” representation will fail to consistently produce individuals informed on the complexities of APIA diversity and health concerns.

The APIA community is at a critical stage in its evolution towards truly democratic representation. The complexities of APIA diversity and their impact on community health problems and solutions require considerable knowledge, familiarity, experience and sensitivity in compiling optimal improvement strategies. Solely race-based recruitment efforts to influential advisory committees, task forces or commissions often make two wrong assumptions:

1. Any one APIA representative is familiar with and sensitive to the issues facing all APIA ethnic subgroups.
2. Any one APIA health professional is familiar with all the health-related issues and concerns of every APIA ethnic subgroups.

Such assumptions if not corrected will grossly compromise the quality of policy-driven collaborative initiatives to address APIA community health needs. The AAPI Health Summit (June 1995) and the AA/PI Health Research Conference (January 1996) are stellar examples of broadly inclusive processes that accurately address the breadth of major APIA health concerns and needs.

7. Future Projections for California's APIA Population

A 1993 study projected that by the year 2020, there would be from 17.9 million to 20.2 million APIAs residing in the United States, (Ong & Hee, 1993). The higher projection of 20.2 million was based on a base APIA fertility rate of 2.3 births per female, decreasing by about 0.1 birth every ten years and a base APIA immigration rate of 210,000 per year, increasing by 40,000 over a ten-year period. The lower projection of 17.9 million was based on a constant fertility rate of 2.01 births per female and a constant immigration rate of 210,000 per year. A third projection based on a base fertility rate of 2.0 births per female, increasing by about 0.1 births every ten years and an immigration rate of 210,000 per year, increasing by 10,000 over ten years also resulted in a projected year 2020 population of 17.9 million. The same projections resulted in an estimate of between 7.4 million to 8.5 million APIAs in California by the year 2020.

In fact, the rate of APIA immigration to the U.S. has been much higher during the 1990s. The Immigration and Naturalization Service (INS) reports that 338,581, 358,533, 356,955 and 358,047 APIA immigrants were admitted to the U.S. in fiscal years 1990, 1991, 1992 and 1993. (These numbers also include a minimal number of immigrants from the Middle East each year as part of "Asia.") (INS Statistical Yearbook, 1994). On the other hand, the actual fertility rate for females age 15–44 in California in 1990 was 2.1 births per female. However, this rate was calculated only for married females, thus the 1993 projections are likely to be low.

However, legislation currently pending in Congress would dramatically reduce the number of APIA immigrants entering the United States in the future and thus affect both the immigration and fertility rate assumptions used in any future APIA population projections. (*See, e.g.,* H.R. 2202 [Smith, R-TX] and S.1394 [Simpson, R-WY].) The pending legislation would eliminate four of the five current "family preference" categories for adult children of U.S. citizens and permanent residents and for siblings of U.S. citizens, resulting in about a

one-third reduction in family-based immigration. These reductions would have a disproportionate impact on future APIA immigration. Over one million of the 1.6 million individuals currently waiting for admission in the sibling category and over 300,000 of the 824,000 individuals waiting in the adult children categories targeted for elimination are from Asia (U.S. Department of State Bureau of Consular Affairs, 1994). In fiscal year 1993, 47.5%, or 60,829, of those immigrants who would *not* have been admitted if the proposed changes had been in effect were APIA immigrants, (INS Statistical Yearbook, 1994). The impact on the APIA population of the proposed elimination of the sibling immigration category is even more dramatic. 59.2% of all immigrants in the sibling category, or 36,884 APIA immigrants, would not have been admitted in fiscal year 1993 if the pending changes had been in effect. Other proposed changes would reduce refugee admissions, principally from Vietnam and Russia, in half. 38,198, or 34% of all refugee admissions in fiscal year 1993, were refugees from Vietnam, Laos, Cambodia, and China, (INS Statistical Yearbook, 1994).

These potential reductions in overall immigration and refugee admissions will directly impact the APIA population in California. The percentage of the total number of all immigrants to the U.S. who intend to reside in California upon admission has decreased from 44.4% in fiscal year 1990 to 28.8% in fiscal year 1993 (INS Statistical Yearbook, 1994). The percentage of refugees and asylees who receive permanent residence that reside in California also has decreased from 39.5% to 31.0% from fiscal year 1990 to fiscal year 1993 (INS Statistical Yearbook, 1994). While these state residence figures would be slightly different for APIA immigrants and refugees as a subgroup of all immigrants and refugees, they demonstrate how significant any changes in national immigration policy and law are to the APIA population in California.

8. Role of APIAs in the Formation of California's Public

Asian and Pacific Islanders currently comprise 10% of California's population. California APIAs represent 39% of the total U.S. APIA population. They are the fastest growing minority group and yet, our state health system fails to accurately identify and monitor diverse APIA subgroup health status. Furthermore, inadequate attention has been paid toward the unique policy, service, research and educational health problems and issues facing California APIAs. The following recommendations offer opportunities to improve our knowledge and understanding of APIA health status and to plan and implement effective strategies for an inclusive "healthy California" APIA Community.

A. Policy Recommendations

1. Support program development and dissemination strategies that present the facts on immigration—its historical and ongoing positive contribution to the U.S. economy and quality of life. Effective public education campaigns are necessary to dispel myths about the negative impact of immigration on the U.S. economy, jobs, entitlements, etc. This is a crucial step in gaining public policy support for a health care system that will include medically underserved APIAs.
2. Convene health experts and state health officials to define supplemental *Healthy People 2000* objectives for California's APIA community.
3. Support collaborative efforts between APIA community leaders, state health officials and health sector professionals (public and private) that will institutionalize:
 - a) accurate, ongoing evaluation of medically underserved APIA sub-populations through health surveillance systems and research that identify ethnicity, nativity, years immigrated, English proficiency, income, insurance status and education along with the following health-specific issues or problems detailed above.

- b) accountability systems for improvement in APIA health status (including supplemental APIA *Healthy People 2000* objectives) by public health systems, managed care organizations and other health providers (public and private).
 - c) cooperative efforts between state agencies with overlapping missions (e.g. the State Department of Alcohol and Drug Programs and the State Department of Mental Health should develop policies and procedures so that the two funding streams can be integrated in order to fund programs that serve the “dual diagnosis” client with substance abuse and mental health problems).
 - d) cooperative efforts between law enforcement, health professionals and immigration officials in accurately reporting anti-Asian violence and domestic violence.
 - e) new statewide certification of certain preventive screenings and assessments as prerequisites to school entry (e.g. immunization completion). This would include dental screening and completion of treatment.
4. Cross-cutting issues for California’s research, health care services and health professions training programs:
- a) convene experts to address medically underserved high-risk APIA subgroups as a priority through identifying ethnic-specific gaps in existing systems and defining, planning and implementing corrective strategies.
 - b) support compilation, definition, refinement and implementation of APIA cultural/linguistic competence curriculum and practice integration strategies.
 - c) advance broad-based APIA community participation that ensures gender, age, class, sexual orientation, disabled and diverse ethnic representation in addition to health issue and culturally-specific expertise.
5. Support proactive health care reform efforts directed towards comprehensive (medical, dental, mental health and long-term care), universal coverage for all Californians.

B. Services Recommendations

1. Support prevention emphasis and primary care access to address APIA-specific health problems for medically underserved populations. The majority of APIA health specific problems (including low and high prevalence disease) would be addressed by effective primary and secondary prevention strategies. Access to culturally competent, community-based health education campaigns and primary care services are critical elements to their success.
2. Support programs that target high prevalence and or ethnic-specific medical, mental health, substance abuse, oral/dental, genetic, occupational and environmental health problems (*see all problems identified in Policy Recommendations, page 65*). The following are offered as only a few examples of the many that are needed:
 - a) oral/dental health: dental services access and coverage of sealants, school-based dental services, community water fluoridation
 - b) women's health: maternal and child health, domestic violence, breast and cervical cancer screening utilization
3. Support programs that break through cultural barriers through the following ways:
 - a) integrate traditional APIA ethnic-specific health beliefs and cultural practices in health care and prevention campaigns
 - b) cultural/linguistic signage and literature
 - c) ongoing cultural competence (*see Education and Training Recommendations, page 70*) training and planning strategies for staff
 - d) hiring interpreter staff as cultural/linguistic experts on the health team
4. Support existing ethnic-specific networks of community-based human service providers for:
 - a) accessing medically underserved APIAs and providing comprehensive services (medical, mental health, substance abuse, dental/oral, health education, etc.) in managed care settings and/or independently
 - b) sharing information on successful models and techniques in prevention, diagnosis and treatment

5. Promote grassroots peer support movements among medically underserved APIAs coping with specific health and mental health (including substance abuse) problems. Build in advocacy training and family support methods. Innovative approaches can include combining health education (e.g. parenting skills) with English classes.
6. Support institutionalization of quality assurance measures (especially in managed care settings) that will:
 - a) ensure high quality care and access for all APIA subgroups
 - b) incorporate medical, mental health, dental, environmental and occupational health indicators

C. Research Recommendations

1. Support the following research that targets high-risk, medically underserved APIA subgroups for whom inadequate information is available:
 - a) population-based surveys using national models (e.g. NHIS, NHANES, BRFSS) plus modifications to ensure cultural sensitivity and adequate sampling of smaller ethnic subgroups
 - b) secondary analyses of existing statewide data sets including vital statistics, reportable disease, surveys, Medi-Cal and Medicare, etc.
 - c) outcomes studies on:
 - the impact of managed care on access, morbidity/mortality and quality of care
 - standardized national practice guidelines
 - primary and secondary prevention strategies for high incidence disease and low incidence disease with proven cost-effective mainstream interventions (e.g. Pap smear screening, prenatal care, etc.)
 - d) longitudinal studies that explore the influence of migration and acculturation on behaviors, risk factors, disease prevalence and other morbidity/mortality indicators
 - e) studies that address high prevalence disease or data gaps (*see Policy Recommendations*, page 65) for APIA subgroups

2. Support and test effectiveness of methodologies that incorporate:
 - a) culturally-specific strategies
 - b) community participation in all phases of planning, implementation, analysis and dissemination of results
 - c) community capacity-building, leadership development and sustainability features
3. Support studies on the effectiveness of traditional medicine and cultural practices in prevention, diagnosis and treatment of chronic disease (CDC, 1995).
4. Support studies that explore the determinants of significantly positive health profiles of APIA subgroups.
5. Support studies on substance abuse and its origins among APIA subgroups. This includes studies of both risk factors and resiliency, supportive, protective and empowering factors; how stigma, shame, denial and silence can be overcome so that individuals who need substance abuse prevention and treatment services will come forward and use them when available and become knowledgeable and empowered consumers.
7. Support studies that identify and characterize environmental and occupational factors that have the greatest disproportionate adverse impact on the health status of low-income, APIA communities and workers.
8. Support technical training programs and mentorship linkages to assist community-based researchers (NIH, 1996).
9. Convene regular meetings of APIA research and community health leaders to plan, implement and evaluate an advocacy agenda for California APIA research.
10. Support collaborative community-academia research efforts.
11. Establish an APIA research center that will:
 - a) serve as a central repository of existing APIA data sets
 - b) focus on identifying and addressing prevailing research and data/surveillance needs for California's APIA community

- c) provide research training and information dissemination opportunities for APIA researchers and community members at large

D. Education and Training Recommendations

1. Support curriculum modifications in California's health professions training institutions and continuing education (CME/CEU) programs to increase APIA knowledge and understanding by including:
 - a) general medical, mental, oral/dental, genetic, occupational and environmental health problems commonly encountered among or unique to APIA populations (*see Policy Recommendations*, page 65). Some examples include:
 - oral/dental health—need for early periodic screening for tooth decay; counseling on feeding practices to prevent BBTD
 - environmental/occupational health—understanding the links between health and pollution; clinician training in occupational and environmental medicine
 - b) traditional health beliefs and cultural practices among diverse APIA subgroups including:
 - exploring different APIA subgroup perceptions pertaining to causes, prevention, diagnosis and treatment of disease (UC, 1994)
 - nutritional beliefs and practices (UC, 1994)
 - spiritual beliefs and practices
 - acupuncture, herbal medicine and other traditional medicine practices
 - c) culturally competent approaches and strategies that will improve services and research among APIA populations. For example:
 - understanding cultural influences (and bias) on both patient and provider perceptions and practices
 - avoidance of cultural stereotyping
 - how to work effectively with interpreters
 - blending Western approaches into an APIA cross-cultural context that overcomes barriers in adherence to preventive, diagnostic or treatment regimen
 - language courses relevant to APIA subgroups

- incorporating APIA cultural values, beliefs, customs, practices and languages into research methodologies and clinical settings (NIH, 1996)
 - special attention to the unique cultural context of age, gender, disability and sexual orientation for APIA subgroups
2. Support more APIA cultural competence training centers (e.g. the National Asian American Mental Health Training Center, Los Angeles) and broad dissemination plans for the above curriculum.
 3. Support multilingual/multicultural health professions recruitment goals that will accurately address the needs of California's diverse APIA subgroups.
 4. Promote culturally competent role models (in health policy, research and clinical services) through mentorship linkages with high school, undergraduate and health professions training institutions to encourage and reinforce careers that address prevailing APIA community health needs.
 5. Promote public education campaigns targeting APIA community members and workers to enhance awareness of health (medical, mental and dental) promotion; disease prevention and early detection, and; environmental and occupational health issues.

E. Leadership Recommendations

Promote APIA Community health leadership and quality participation in California's health planning, implementation and evaluation.

1. Convene regular meetings of APIA community health leaders and relevant professionals to define, plan, implement and evaluate an advocacy agenda for:
 - a) California medically underserved APIA, safety net health services
 - b) surveillance system and research needs for California APIA subgroups
 - c) cultural competence curriculum initiatives for California's high school, undergraduate and health professions training institutions
 - d) building an inclusive (diverse), cohesive and effective APIA health leadership network to address community health needs and concerns

2. Support the development of unique, culturally-specific leadership training models for California's diverse APIA future health leaders. Specific attention must be paid to:
 - a) inclusiveness of all APIA subgroups, especially new, emerging populations
 - b) sensitivity and knowledge about diverse APIA health needs and concerns
 - c) culturally-specific leadership and followership styles
 - d) effective mainstream leadership philosophy and practices
 - e) understanding California's health care system organization, structure and operation at state and local levels
3. Promote health leadership mentoring linkages and programs for emerging APIA health leaders at all levels of health career training (CDC, 1995).
4. Support telecommunications training and updating to ensure APIA leadership access and utilization of our most advanced communications technology for information sharing, technical assistance, electronic mail and bulletin board opportunities, etc. (NIH, 1996).

Bibliography

Demographics

1990 Census Public Use Microdata Sample File, Washington DC: US Department of Commerce; 1990.

Our ten years of growth: A demographic analysis on Asian and Pacific Islander Americans, San Francisco, CA: Asian/Pacific Islander Data Consortium–Asian & Pacific Islander Center for Census Information and Services; 1992, pp. 7, 26.

1990 CP-2-6, Social and Economic Characteristics for California, Washington, DC: US Department of Commerce; September 1993, pp. 179–183, 187–88, 246–7, 250–59.

Vital Statistics and Hospital Discharge Survey

Perinatal Resource Guide for Providing Care to Asians and Pacific Islanders. Oakland, CA: Association of Asian Pacific Community Health Organizations; 1994.

The age-specific leading causes of death and cause-specific mortality analysis in California: analysis of State of California mortality data, 1989–1991. San Francisco, CA: Asian & Pacific Islander American Health Forum; 1993.

Mortality of Asian and Pacific Islander elderly in California: Analysis of State of California mortality data, 1989–1991. San Francisco, CA: Asian & Pacific Islander American Health Forum; 1993.

Teen and young adult mortality in California: Analysis of State of California mortality data, 1989–1991. San Francisco, CA: Asian & Pacific Islander American Health Forum; 1993.

Fact sheet on hypertension. San Francisco, CA: Asian & Pacific Islander American Health Forum; 1990.

California Hospital Discharge Survey. Sacramento, CA: California Department of Health Services; 1994.

The 1991–1992 National Women of Color Reproductive Health Poll. Communications Consortium Media Center and the National Council of Negro Women; 1992.

Dumbauld S, McCullough JA, and Sutocky JW. *Analysis of health indicators for California's minority populations*. Minority Health Information Project; February 1994.

Annual Report Statistical Supplement 1990. Honolulu, HI: Hawaii Department of Health, Office of Health Status Monitoring; October 1992.

Ho B. Modesty, sexuality, and breast health in Chinese-American women. *Western Journal of Medicine*. 1992 September; 157: 260–4.

Janes CR. *Migration, Social change and health: a Samoan community in Urban California*. Stanford, CA: Stanford University Press; 1990.

Lin-Fu JS. Asians and Pacific Islander Americans: an overview of demographic characteristics and health care issues. *American Journal of Public Health*, 1993 Summer; 1(1): 20–36.

Martin JA. Birth characteristics for Asian or Pacific Islander subgroups, 1992. *Monthly Vital Statistics Report*. 43(10), suppl., Hyattsville, MD: National Center for Health Statistics; 1995.

Mayeno L, and Hirota SM. Access to health care. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.

San Francisco Resident Teen Birth Statistics: 1991. San Francisco, CA: San Francisco Department of Public Health Perinatal Program; 1993.

Reportable Disease & Chronic Disease

Perinatal Resource Guide for Providing Care to Asians and Pacific Islanders. Oakland, CA: Association of Asian Pacific Community Health Organizations; 1994.

California: Cancer Facts and Figures. American Cancer Society; 1996.

Bader, et al., *San Francisco Billboard Survey: Race, Tobacco and Alcohol*. California Rural Legal Assistance; 1993. unpublished.

Bates, S R, et al. Cardiovascular disease risk factors in an Indochinese population. *American Journal of Preventive Medicine*; 1989 Jan-Feb., 5(1), 15–25.

Burns, D and Pierce, JP. *Tobacco Use in California, 1990–1991*. Sacramento, CA. Department of Health Services.

California Asian Health Issues in the 1990's Commission for Economic Development; April 20, 1990.

Report of Verified Cases of Tuberculosis. Sacramento, CA: California Department of Health Services, Tuberculosis Control Branch; 1995.

Cancer incidence and mortality in California by detailed race/ethnicity 1988–1992. Sacramento, CA: California Department of Health Services, California Cancer Registry; 1995.

Domestic Violence Arrests in California by Ethnicity. Sacramento, CA: California Department of Justice Law Enforcement Center; 1994.

Tuberculosis among Asian/Pacific Islanders–U.S., 1985. *MMWR*. 36:331–334.

Behavioral Risk Factor Survey of Vietnamese, California, 1991. *MMWR*. 41(5), 69–72.

Behavioral Risk Factor Survey of Chinese, California, 1989. *MMWR*. April 24, 1992, Vol. 41, No. 16., pp. 266–270.

Chen, A, et al. Special health problems of Asians and Pacific Islanders. In: R. N. Matzen & R. S. Lang (eds.), *Clinical Preventive Medicine*. 1993 (pp. 739–761). MO: Mosby.

Cochran SD, Mays VM, and Leung L. Sexual practices of heterosexual Asian American young adults implications for risk of HIV infection. *Archives of Sexual Behavior*; August 1991 20(4): 389–91.

Crews, Douglas E. Obesity and diabetes. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994: pp.174–208.

Gock TS. Acquired immunodeficiency syndrome. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.

Harder & Kibbe. *California HIV Prevention Plan, California Community Planning Working Group*, Harder & Kibbe Research; October 1994.

Harris et al. Prevalence of diabetes and impaired glucose tolerance and plasma glucose levels in U.S. population aged 20–74 years. *Diabetes*. 1987; 36, pp. 523–534.

Hohn AR, Dwyer KM, Dwyer JH. Blood pressure in youth from four ethnic groups: *The Pasadena Prevention Project*. *Journal of Pediatrics*. 1994; 125: 368–373.

- Horan PF, and DiClemente RJ. HIV knowledge, communication, and risk behaviours among white, Chinese and Filipino-American adolescents in a high prevalence-AIDS epicenter: a comparative analysis. *Ethnicity and Disease*. Spring 1993; 3(2): 97–105.
- Hung S et al. Dietary intake patterns of Vietnamese in California. *Journal of Nutrition Education*, March–April 1995; Volume 27, Number 2, pp. 63–68.
- Jenkins CNH and Kagawa-Singer M. Cancer. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.
- Klatsky, A.L. and Armstrong, M.A. Cardiovascular risk factors among Asian Americans living in Northern California. *American Journal of Public Health*. November 1991; pp. 1423–1428.
- HIV/AIDS Surveillance Bulletin*. Los Angeles, CA: Los Angeles County Department of Health Services; October 1995.
- Lee D & Fong K. HIV/AIDS and the Asian and Pacific Islander Community, *SIECUS Report*. 1990.
- Melton LJ. Hip Fractures: A worldwide problem today and tomorrow. *Bone*, 1993; 14 (supp): S1-8.
- Immigration: women and girls where do they land? Who we welcome and why*. National Council for Research on Women. 1995; 1(3):12–13.
- Ng, Peter. Personal Communication. San Francisco, CA: San Francisco Department of Public Health. Health Center 4; 1995.
- Pawson, I.G. & Janes, C. Massive obesity in a migrant Samoan population. *American Journal of Public Health*, 1981; Vol. 71, pp. 508–513.
- Pawson, I.G. The morphological characteristics of Samoan adults. In Baker et al., (eds), *The Changing Samoans: Behavior and Health in Transition*. New York, New York: Oxford University Press; 1986: p. 254–274.
- HIV/AIDS Surveillance Bulletin*. San Francisco, CA: San Francisco Department of Health; October 1995.
- San Francisco HIV Prevention Planning Council*. San Francisco, CA. 1994.
- Snipes K. et al., *Cancer Incidence and Mortality by Race/Ethnicity in California, 1988–1990*. Sacramento, CA: California Department of Health Services, Cancer Control Branch; March 1993.
- Stavig et al., Hypertension and related health issues among Asians and Pacific Islanders in California. *Public Health Reports*, 103, pp. 28–37.
- Stavig, G.R., et al., Hypertension among Asians and Pacific Islanders in California. *American Journal of Epidemiology*, 119, pp. 677–691.
- Tamir A. and S. Cachola. Hypertension and other cardiovascular risk factors. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994: pp. 209–246.
- Willey, Marianne B. et al., “Cigarette point-of-sale advertising in ethnic neighborhoods in San Diego, California,” *Health Values*. January/February 1992; Vol. 16, No. 1.
- Zane et al., (eds). *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994: pp. 105–147.

Genetic Disease

Zeng YT, Huang SZ: Disorders of hemoglobin in China, *Journal of Medical Genetics*. 1987; 24:578–583.

Screening of Asian and Pacific Islander prenatal patients in community health centers from 1988–1991 (unpublished data). Oakland, CA: Association of Asian Pacific Community Health Organizations; 1991.

Chen AM, Ng P, Sam P, et al.: Special health problems of Asians and Pacific Islanders. In: Matzen R, Lang R, eds.: *Clinical Preventive Medicine*. 1993.

Panich V: Glucose-6-phosphate dehydrogenase deficiency: genetic heterogeneity in Asia. In: Weatherall D et al., eds. *Advances in Red Cell Biology*. New York, NY: Raven Press; 1982.

Flatz G: The genetic polymorphism of intestinal lactase activity in adult humans. In: Scriver C et al., eds: *The Metabolic Basis of Inherited Disease*. New York, NY: McGraw-Hill; 1989.

Mental Health

Austin, G. (In process). *ATOD use among Asian American youth. State Attorney General's Fourth Biennial Statewide Survey of Drug and Alcohol Use Among California Students in Grades 7, 9, and 11*. Sacramento, CA: California Attorney General; 1993.

Alcohol and other drug concerns among California Asians and Pacific Islanders. Sacramento, CA: California Department of Alcohol and Drug Programs; 1990.

Proceedings of the Asian American and Pacific Islander First National Health Summit. (In process). Atlanta, GA: Centers for Disease Control and Prevention.

Center on Addiction and Substance Abuse Annual Report. New York, NY: Center on Addiction and Substance Abuse: Columbia University; 1994.

Gibbs, Jewelle, Huang, Larke & Associates. *Children of Color: Psychological Interventions with Minority Youth*. Jossey-Bass Inc., Publishers; 1989.

Gibbs, et al., & Li-Repac D. Personal communication. August 8, 1988.

Gibbs, et al., & Lubeck SG, Personal communication. May 5, 1987.

Meinhardt, K., Cablas, A., Jerrell, J., Jay, D., and DiCamillo, M. *California Household Mental Health Survey of 1992*. Sacramento, CA: California Department of Mental Health; 1994.

Proceedings of the 5th National Conference. (In process). Los Angeles, CA: National Asian and Pacific American Families Against Substance Abuse.

1974 National Conference on Asian-American Mental Health. Rockville, MD: National Institute of Mental Health; 1974.

President's Commission on Mental Health. Special Population Subpanel on the Mental Health of Asian and Pacific Americans. Washington, DC: US Government Printing Office; 1978.

Cost of Addictive and Mental Disorders and Effectiveness of Treatment. Rockville, MD: Substance Abuse and Mental Health Services Administration, US DHHS; 1994.

Sue, S. Mental health. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.

Westemeyer, J., Vang, T.F., and Neider, J. Symptom change over time among Hmong refugees: psychiatric patients versus nonpatients. *Psychopathology*. 1984; 17, 168–177.

Oral Health

Lee, J. Oral disease beliefs, behaviors, and health status of Korean Americans. *Journal of Public Health Dentistry*, 52(3); Spring 1992; pp. 131–136.

Healthy People 2000, National Health Promotion and Disease Prevention Objectives. Washington, DC: Department of Health and Human Services, Public Health Service. September 1990; PHS 91–50212.

Oral Health of United States Children, The National Survey of Dental Caries in US School Children: 1986–1987. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health. September 1989; NIH 89–2247.

Ripa L. Nursing caries. A Comprehensive Review. *Pediatric Dentistry*. 1988; 10(4): 268–82.

Broderick E, Mabry J, Robertson D, Thompson J. Baby bottle tooth decay in Native American children. *Public Health Reports*. 1989; 104:50–54.

Pollick H. *Draft Report of the California Oral Health Needs Assessment 1993–94*. (unpublished) The Dental Health Foundation, 1995. Supported by grants from the Maternal and Child Health Branch, California Department of Health Services and The California Wellness Foundation.

Greer MHK. *Statewide Oral Health Assessment Survey of Public School Children in Hawaii, 1993–94*. (unpublished) Honolulu, HI: Hawaii Department of Health, Division of Dental Health.

Louie R, Brunelle JA, Maggiore ED, Beck R. Caries Prevalence in Head Start Children, 1986–87. *Journal of Public Health Dentistry*. 1990; 50(2):299–305.

Child and Adolescent Health

Report of the AAP Task Force on Minority Children's Access to Pediatric Care. American Academy of Pediatrics. 1994.

Trichinella Spiralis Infection-United States. *MMWR*. 1991; 40:57–60.

Chan, G. Dietary calcium and bone mineral status of children and adolescents. *American Journal of Diseases of children*. 1991; 145:633–34.

Client and Service Summary Statistics for the Period 07/01/84–06/30/85. Los Angeles, CA: County of Los Angeles Department of Mental Health; 1986.

Flatz G. The genetic polymorphism of intestinal lactase activity in adult humans. In: Scriver C, et al., eds: *The Metabolic Basis of Inherited Disease*. 6th ed. New York, NY: McGraw-Hill. 1989; 2999–3006.

Pun, KK, Arnaud CD. Calcium content of common food items in the Chinese diet. (Abstract) In: *Clinical Proceedings: 6th International Conference on Health Problems Related to the Chinese in North America*. San Francisco, CA: 1992. p. 57.

Rowe, PM. New US recommendations on calcium intake. *Lancet*. 1994; 343: 1559–1560.

Health Center 4-CCDC Data. San Francisco, CA: San Francisco Department of Public Health.

Women's Health References

The Health and Well-Being of Asian and Pacific Islander American Women. Oakland, CA: Asians and Pacific Islanders for Reproductive Health; 1995.

Ho B. Modesty, sexuality, and breast health in Chinese-American women. *Western Journal of Medicine.* September 1992; 157: 260–4.

Maclean U, Sinfield D, Klein S, and Harnden B. 1984. Women who decline breast screening. *Epidemiol Community Health.* 1984; 38:278–83.

Pinhey, TK, Iverson TJ, and Haddock, RL. The effects of marriage and being a parent on prenatal physician visits for Chamorro, Filipino, White and other Asian and Pacific Island women on Guam. *Asian American and Pacific Islander Journal of Health.* Winter 1994; 2(1):18–30.

The 1991–1992 National Women of Color Reproductive Health Poll. Communications Consortium Media Center and the National Council of Negro Women; 1992

Elderly

Special Report on Asian Pacific Islander Populations in Bay Area Counties. The Association of Bay Area Governments; 1991, pp. 4, 6–7.

ABAG Regional Data Center Analysis of Population. The Association of Bay Area Governments; May 1992; pp. 1, 4.

Impact of HR 4 on A/PI Legal Permanent Residents, 1990 Census PUMS file

(5% sample), Table 3. San Francisco, CA: API Center for Census Information and Services at the Asian and Pacific Islander Health Forum; 1994: p. 5.

Deaths Due to Suicide Among Elderly APIA Women—Analysis of State of California Mortality Data, 1989–1991. San Francisco, CA: Survey and Research Program. Asian and Pacific Islander American Health Forum; 1994

Boult & Boult. Underuse of physician services by older Asian Americans. *Journal of American Geriatrics Society.* 1995; 43:408–411; 1995.

Doung, VH. The Indochinese patient. In: *Urban Family Medicine.* New York: Springer-Verlas. 1987; pp. 238–242.

Liu WT, Yu ESH. Asian/Pacific American elderly: mortality differentials, health status and use of health services. *J Appl Gerontol.* 1985; 4(1):35–64.

McIntosh JL, Santos JF. Suicide among minority elderly: a preliminary investigation. *Suicide and Life-Threatening Behavior.* Fall 1981; 11(3):151–66.

Gay, Lesbian, Bisexual and Transgendered Issues

Choi KH, Salazar N, Lew S and Coates JT, AIDS risk, dual identity, and community response among gay Asian and Pacific Islander men in San Francisco, In: Herek GM, Greene B, eds., *AIDS, Identity and Community: The HIV Epidemic and Lesbians and Gay men.* Thousand Oaks, CA: Sage Publications. 1995; pp. 115–134.

Nakajima GA, Kono R, Katz M, Liu J and O'Malley P, "Mental health care utilization of Asian and Pacific Islander men with HIV in San Francisco," Abstract, Tenth International Conference on AIDS; August 1994.

Carrier J, Nguyen B and Su S. Vietnamese American sexual behaviors and HIV infection. *Journal of Sex Research*. November 1992; Vol. 29, No. 4. pp.547–560.

Environmental & Occupational Health

Lee, PT. *Misleading Assumptions and Environmental Racism: The case of Asian and Pacific Islanders*. Written testimony for House of Representatives, Subcommittee on Civil and Constitutional Rights. March 3, 1993.

Ow-Wing, T. *Race, Poverty, and the Environment Newsletter*, Spring 1992.

Lee, PT. Labor Occupational Health Program. Berkeley, CA: University of California. Personal communication; 1992.

Hong, L. Beware of lead in decorative tableware. *Asian Week*. October 30, 1992.

Simon, P, MD MPH.; Zimmerman, A, MPH, RD; O'Connor, W, MPA; and Vang, C. The risk of lead poisoning among Southeast Asian refugee children in Rhode Island 1984–1988. *Rhode Island Medical Journal*. August 1989; Vol. 72, No. 8. pp. 283–287.

Friedman-Jimenez, G., M.D. Achieving environmental justice: The role of occupational health. *Fordham Urban Law Journal*. 1994; Volume XXI, Number 3, p. 605.

Chu, F. Dangers in the workplace, Asian workers at risk. *Race, Poverty, and the Environment*. Spring 1992.

Lee, PT. Labor Occupational Health Program. Berkeley, CA: University of California. Interview, November 1995.

Young-Im, Y. Asian Immigrant women advocates. *Race, Poverty, and the Environment Newsletter*. Spring 1992; p. 12.

Chin, J. Examples of environmental issues impacting AA/PI's. December 20, 1991.

Harris, M. personal communication. August 24, 1992.

Fish Advisory Report. Regional Water Quality Control Board; December 1994.

Update to the EPA, Exposure Factors Handbook. Washington DC: EPA; May 1995

Barriers and Enabling Dynamics

Asians and Pacific Islanders in the United States. Washington DC: US Government Printing Office, US Census; August 1993.

The Foreign-Born Population in the United States. Washington DC: US Government Printing Office, US Census; July 1993.

US Census: Statistical Abstract of the United States, 1992. Washington DC: US Government Printing Office; 1992.

Chronic Disease in Minority Populations. Atlanta, GA: Centers for Disease Control and Prevention; 1994.

Brown ER, Valdez RB, Morgenstern H, Wang C, and Mann J. *Health insurance coverage of California in 1989*. Berkeley, CA: University of California, California Policy Seminar, 1991.

Dolan G et al.: Lead poisoning due to Asian ethnic treatment for impotence. *Journal of the Royal Society of Medicine* 84. 1991; (10): 630–631.

- Lightfoote J et al.: Lead intoxication in an adult by Chinese herbal medication. *JAMA*. 1978; 238:1539.
- Ries C, Sahud M: Agranulocytosis caused by Chinese herbal medicines. *JAMA*. 1975; 231:352.
- Siao GW-T: Officials warn of dangers of some herbal medicines. *Asian Week*. 1989; 10(28):17.
- The Medical Letter: Toxic reactions to plant products sold in health food stores. *The Medical Letter*. 1977; 21(7):29–31.
- Dutton D. Financial, organizational, and professional factors affecting health care utilization. *Social Sciences Medicine*. 1986; 23 (7)721–735.
- Jenkins CNH, Mcphee SJ, Bird JA and Bonilla N. Cancer risks and prevention practices among Vietnamese refugees. *Western Journal of Medicine*. 1990;153, 34–39.
- Korean Health Survey Task Force. Korean Health Survey*. (Unpublished manuscript) Los Angeles, CA: Korean Health Education, Information and Referral Center; 1989.
- Lew R and Chen A. *A community survey of health risk behavior among Chinese Americans*. Paper presented at the annual meeting of the American Public Health Association; 1990.
- Lin-Fu JS. Population characteristics and health care needs of Asians/Pacific Islanders. *Public Health Reports*. 1988; Vol. 103, No. 10 (18–27).
- Lin-Fu JS. Ethnocultural barriers to health care: a major problem for Asian and Pacific Islander Americans. *Asian American and Pacific Islander Journal of Health*. 1994; Vol.2, No. 4(290–298).
- Lott JT and Pian C. *Beyond stereotype and statistics: Emergence of Asian and Pacific American Women*. Washington DC: Organization of Pan Asian American Women; 1979.
- Lum CK and Korenman SG. Cultural-sensitivity training in U.S. medical school. *Academic Medicine*. March 1994; Vol. 69 Number 3: 239–241.
- Lo SD, Richman JA, Flaherty JA and Rospenda KM. Medical education and need for greater awareness of Asian Americans' cultural diversity. *Academic Medicine*. February. 1993; Vol. 68, Number 2: 147–148.
- Mayeno L and Hirota SM: Access to health care. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.
- Rumbaut RG, Chavez LR ,Moser RJ, Pickwell SM, and Wishnik. SM. The politics of migrant health care: A comparative study of Mexican immigrants and Indochinese refugees. *Research in the Sociology of Health Care*. 1988; 7, 143–202.
- Takeuchi DT and Young KN. Overview of Asian and Pacific Islander Americans. In: *Confronting critical health issues of Asian and Pacific Islander Americans*. Thousand Oaks, CA: Sage Publications; 1994.
- True RH. *Health care services delivery in Asian American communities (Report of the Secretary's Task Force on Black and Minority Health, Vol. 2)* Washington, DC: U.S. Department of Health and Human Services; 1985.
- Yu E and Cypress BK: Visits to physicians by Asian Pacific Americans. *Medical Care*. 20, 1982; 809–820.
- Report of the Subcommittee on New Immigrants and Health in California's Rapidly Diversifying Population*. University of California; July 1994.
- Woloshin S, Bickell NA, Schwartz LM, Gany F, and Welch HG. Language Barriers in Medicine in the United States. *JAMA*. 1995; 273:724–728.

A Feasibility Study on the Establishment of an Asian & Pacific Islander Mentorship Recruitment Network Program. San Francisco, CA: Asian & Pacific Islander American Health Forum; June 1995.

Bagasao, PY., Ph.D. Recommendations on How to Break Down Barriers to the Development of Asian and Pacific Islander Health Care Providers. In: *Partners in Human Service: Shaping Health Care and Civil Rights Policy for Asian and Pacific Islander Americans Final Report.* Washington DC: 1993.

Chin, JL, Ed.D. A Perspective from Community Health Centers. In: *Partners in Human Service: Shaping Health Care and Civil Rights Policy for Asian and Pacific Islander Americans Final Report.* Washington DC: 1993.

Holland, WJ. Government Assistance to Help the Disadvantaged Enter the Health Professions. In: *Partners in Human Service: Shaping Health Care and Civil Rights Policy for Asian and Pacific Islander Americans Final Report.* Washington DC: 1993.

Miranda, M, M.S. The Testing and Licensing of Foreign Doctors. In: *Partners in Human Service: Shaping Health Care and Civil Rights Policy for Asian and Pacific Islander Americans Final Report.* Washington DC: 1993.

Ponce, N, M.P.P. The Cultural Dimensions of Getting Health Care. In: *Partners in Human Service: Shaping Health Care and Civil Rights Policy for Asian and Pacific Islander Americans Final Report.* Washington DC: 1993.

Enabling Dynamics

Our ten years of growth: A demographic analysis on Asian and Pacific Islander Americans, Asian/Pacific Islander Data Consortium–ACCIS, San Francisco, CA, 1992, pp. 15, 17–18, 20.

Felice ME. Reflections on caring for Indochinese children and youths. *Journal of Developmental and Behavioral Pediatrics.* 1986; 7(2): 124–128.

Hoang GN and Erickson RV. Guidelines for providing medical care to Southeast Asian refugees. *JAMA.* 1982; 248 (6):710–714.

Hoang GN and Erickson RV. Cultural barriers to effective medical care among Indochinese patients. *Annual Review of Medicine.* 1985;36:229–239.

Kraut AM. Healers and Strangers: Immigrant attitudes toward the physician in America: A relationship in historical perspective. *JAMA.* 1990; 263:1807–1881.

Light IH. *Ethnic Enterprise in America.* Berkeley, Los Angeles, London: University of California Press; 1972.

Takaki R. *Strangers from a different Shore: A history of Asian Americans.* Boston, MA: Little, Brown, 1989.

Future Projections for California's APIA Population

Ong P. and Hee SJ. *Twenty Million in 2020, The State of Asian Pacific America: A Public Policy Report,* 1993; pp. 11–23

Statistical Yearbook Fiscal Year 1993, 1994. Immigration and Naturalization Service.

Visa Bulletin. US Department of State, Bureau of Consular Affairs. March 1994; Vol. VII, no. 36A.

Role of APIAs in the Formation of California's Public

Recommendations for improving the health of Asian Americans and Pacific Islanders. In: Chen MS, Wing JS, eds. Proceedings from the first national health summit of Asian American and Pacific Islander Health Organization Leaders. San Francisco. Asian American and Pacific Islander Journal of Health 1996; vol 4 (1-3): 241–275

Recommendations. In: Proceedings from the Pacific Islander Asian American conference on health research and research training. Honolulu: DHHS Office of Minority Health (OMH) and the Office of Research on Minority Health (ORMH) at the National Institute of Health, 1996



**The California Endowment *and*
California HealthCare Foundation**
Woodland Hills, California

Printed on recycled paper